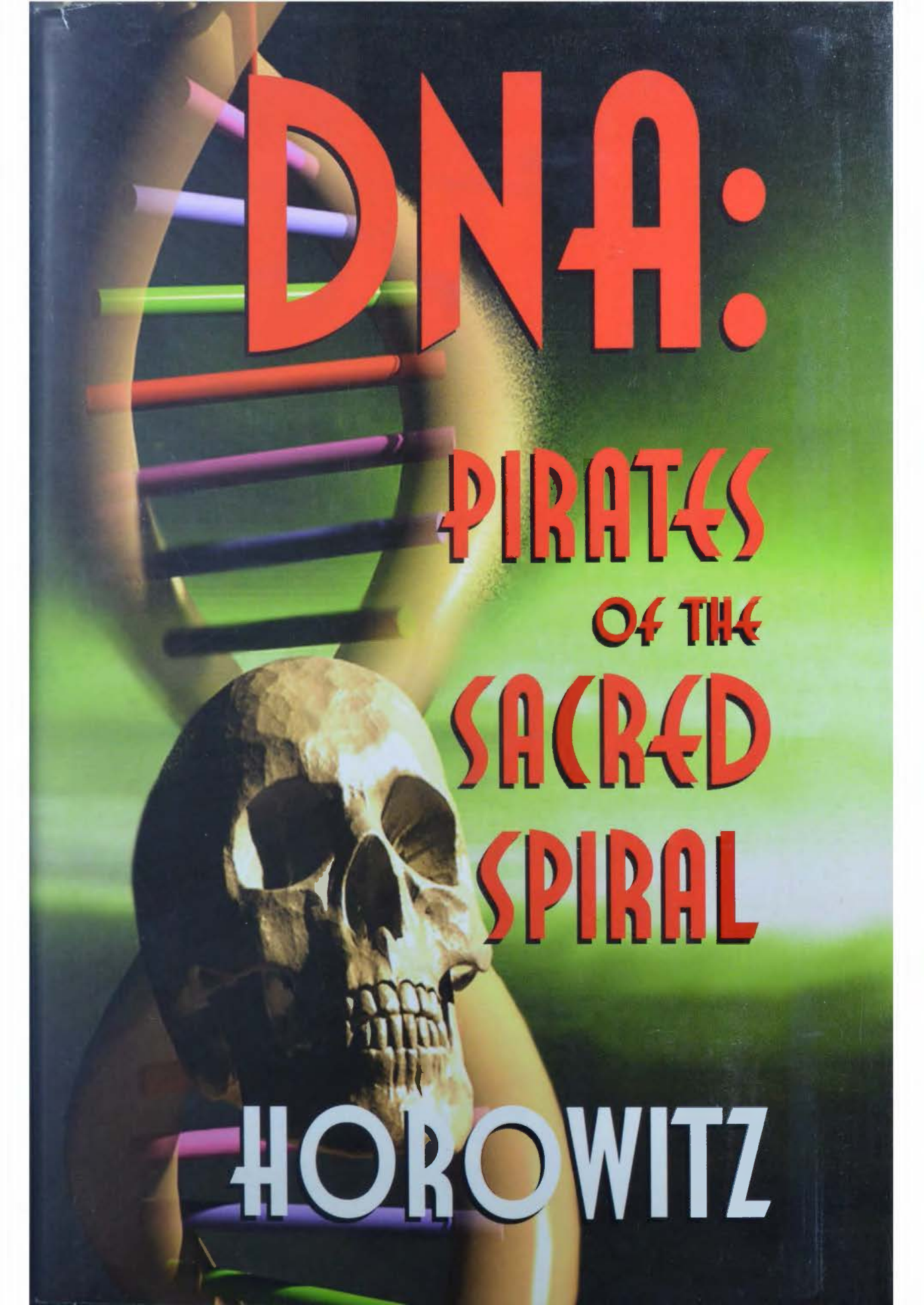




DNA:

PIRATES

OF THE

SACRED

SPIRAL

HOROWITZ

DNA: PIRATES OF THE SACRED SPIRAL

Leading thinkers from sages to scientists have scrutinized nature to learn its physical/chemical, molecular, musical, electromagnetic, energetic, even spiritual secrets. Such knowledge, many warned, might be used for good or evil. Based on the latest science, this monumental book considers both uses and abuses of DNA—"The Sacred Spiral"—and its arguably criminal corporate monopolization by a cadre of elitists.

Stunning evidence compiled herein proves DNA is nature's bioacoustic and electromagnetic (that is, "spiritual") energy receiver and signal transformer converting quantum sound and light signals to physical reality. These scientific revelations bring expanded spiritual meaning to life, physical embodiment, and even evolution.

Genetic industry controllers, however, prefer to keep these uplifting and freeing truths secret. The "Human Genome Pirates," historically infamous and operationally covert, now control genetic patents and spin-off technologies. Generally unrecognized, the world's most powerful banking and pharmaceutical cartel directors aim to direct life's destiny.

What will their future hold for you, your family, and humanity given this risk of manipulation and even threatened extinction?

As humanity teeters on the brink of unprecedented spiritual ascendance or degenerative mutation, argues award winning author and public health expert, Dr. Leonard Horowitz, institutionally secreted science and generally overlooked facts about DNA may be crucial in determining our planet's destiny. Dr. Horowitz brings the genetic engineering and human cloning debates, and unpublicized socioeconomic and political agendas of those who control them, to new levels of analysis. He contends that misplaced faith in the biotech industry, with common corporate and institutional abuses of trust, undermines the practice of medicine, scientific advancement, and even humanity's natural evolution. Myriad species have become extinct for natural and man-made reasons. Modern civilization, likewise, stands imperiled by forces effectively diagnosed and prescriptively treated in this extraordinary text.

As a remedy, this book offers revolutionary new views of emerging genetic science consistent with sacred spiritual knowledge. Chapters incorporate the metaphysical realms of electro-genetics, quantum physics, biophotography, human consciousness, and even spiritual dynamics, to accomplish an urgent mission: awaken humanity to the highest levels of risk awareness and accountability for our common good.

(continued on back flap)

This book explains how or why:

- Creationism, rather than evolution of the species through genetic selection, is best supported by advancing, largely secreted, science.
- Expanded meaning in life can be gained with knowledge of "Spiritual Genesis;" recognizing yourself as nature's conscious act rather than physical freak.
- Civilization is being directed through propaganda, electro-genetic controls, and bioengineering towards enslavement.
- Your unique traits and qualities, including your special purpose in life, is transmitted through your DNA.
- The reincarnation debate must be expanded to include new evidence that ancestral memories may be transmitted through the structured water matrix of DNA.
- Bioengineered life forms and cloned humans present serious global risks with dubious benefits.
- Aging may be slowed, diseases prevented, and even cancers cured through optimal genetic expression.

Written for intelligent lay readers and above, this extraordinary book makes a distinguished contribution to genetic science, human consciousness, and spiritual evolution.

Dr. Leonard G. Horowitz is the author of the national bestselling book, *Emerging Viruses: AIDS & Ebola—Nature, Accident or Intentional?* He has



appeared repeatedly as a newsmaker and public health expert on every major television and radio network in America as well as the BBC and CBC. Distinguished by several academic degrees and previous faculty positions at Harvard and Tufts universities, Dr. Horowitz currently directs development of

a pioneering spiritual center and electrotherapy institute affiliated with the Steam Vent Inn & Health Retreat, and envisioned International Institute for Native and Natural Healing, on the Big Island of Hawaii. His official website is:

www.DrLenHorowitz.com.

Cover design: Tom Miller

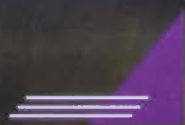
DNA: PIRATES OF THE SACRED SPIRAL

Scientific facts in the multidisciplinary fields of genetics, quantum physics, and electrochemistry solidly prove your physical body is, what Dr. Leonard Horowitz calls, “a crystallization, or precipitation, of love vibrations.” Electrical and magnetic frequencies, and subsensory sound, sourcing from what amounts to a “Universal Orchestra,” moves mountains of physical matter along paths of least resistance flowing into sacred geometric forms that you perceive as the physical world. How you can use this knowledge for personal and global healing is the focus of this monumental work by an award winning author and internationally recognized public health expert.

Widely known as healthcare’s most riveting and controversial motivational speaker, Dr. Horowitz exposes the historically infamous, operationally covert, and repeatedly untrustworthy “Pirates of the Sacred Spiral.” These operatives now control genetic patents and spin-off technologies that threaten civilization’s natural evolution, and even our Divine destiny. The greatest risk of manipulation and threatened extinction is at hand. What will the future hold for you, your family, and humanity?

Read this incredible book filled with compelling truths for answers and expanded meaning of life. Sacred secreted knowledge about your natural genetic inheritance is included herein – truths that are optimally freeing! View the evidence, learn the facts, and enroll in what Dr. Horowitz asserts is a “planetary spiritual renaissance.” This book helps in the recovery of creative consciousness through Divine inspiration and genetic expression.

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DNA:

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of the
Sacred
Spiral

Horowitz

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DNA:

Pirates of the Sacred Spiral

Horowitz

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Second printing

DEDICATED TO SECURING LIFE
FOR THREATENED EARTH.

MAY THIS WORK
AWAKEN THE
“100TH MONKEY”
TO THE ENERGY
THAT ACTIVATES
DNA
TO DIRECT
DIVINE DESTINIES.

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The information contained in this book is intended for educational purposes only. It is not provided in order to diagnose or treat any disease, illness, or injury of the body, mind, or spirit.

The authors, publisher, and distributors of this work accept no responsibility for people using or misusing the potentially empowering information and revelations in this book.

Individuals suffering from any disease, illness, or injury should, as Hippocrates prescribed, “learn to derive benefit from the illness,” and contact appropriate health care professionals; preferably those who have read this book and understand that Divine healing energies are naturally transmitted through well hydrated DNA.

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Abbreviations

ABC—Americans to Ban Cloning
AC—alternating current
ADP—adenosine diphosphate
AEC—Atomic Energy Commission
AEP—2-aminoethylphosphoric acid
AFP—alpha-fetoprotein
AHP—American Home Products company
AIDS—Acquired immune deficiency syndrome
ARCO—Atlantic Richfield Oil Company
ATCC—American Type Culture Collection
ATP—adenosine triphosphate
BCCI—Bank of Credit & Commerce International
CAMP—Center for Applied Microbiology & Research
CDC—Centers for Disease Control and Prevention
CEA—carcinoembryonic antigen
CFR—Council on Foreign Relations
CIA—Central Intelligence Agency
CSH—Cold Spring Harbor (Laboratories)
DHEW—U.S. Department of Health, Education and Welfare
DNA—deoxyribonucleic acid
DNALC—Dolan DNA Learning Center
DoD—U.S. Department of Defense
DoE — Department of Energy
ECF—extracellular fluid
ECM—extracellular (energy) matrix
EmF — Electromagnetic field
EZ—Edmonston Zagreb (measles vaccine)
FADH₂—Fatty acyl-Co[enzyme]A dehydrogenase
FBI—Federal Bureau of Investigation
FDA—Food and Drug Administration
GAO—U.S. General Accounting Office
GMO — Genetically modified organism
HAARP — High Altitude Auroral Research Project
hCG—human chorionogonadotrophic hormone
HGP—Human Genome Project
HIV—human immunodeficiency virus
HLI—Human Life International
HMO—health maintenance organization

IARC—International Agency for Research on Cancer
ICF—intracellular fluid
IEG—immediate early genes
IFEO—International Federation of Eugenic Organizations
JVAP—Joint Vaccine Acquisitions Program
LEDS—light emitting diodes
LPCS—laser photon correlation spectrometer
MKNAOMI—CIA code for secret biological weapons program
MKULTRA—CIA code for mind/population control program
MRA—magnetic resonance analyzer
MRI—magnetic resonance imagery
MWO—multiwave oscillator
NAS—National Academy of Sciences
NBRL—Naval Biomedical Research Laboratory
NCI—National Cancer Institute
NIAID—National Institute for Allergies and Infectious Diseases
NIH—National Institutes of Health
NMR—nuclear magnetic resonance
NRC—National Research Council
NRW—nanostructured resonant water
NSA—National Security Agency
OEM—Office of Emergency Management
OSRD—Office of Scientific Research and Development
PEMF—tissue penetrating electromagnetic fields
PEP-CK—phosphoenol pyruvate carboxykinase enzyme
PhRMA—Pharmaceutical Research & Manufacturing Association
PKU—phenylketonuria
REM—rapid eye movement
RIIA—Royal Institute for International Affairs
SAD—seasonal affective disorder
SRI—Stanford Research Institute
SVCP—Special Virus Cancer Program
SV40—simian virus 40
TENS—transcutaneous electrical nerve stimulation
TST—terminator seed technology
TIGR—The Institute for Genomic Research
USAID—United States Agency for International Development
USPHS—U.S. Public Health Service
VDIG—voltage dependent ionic gate
WASPS—White Anglo-Saxon Protestants
WHO—World Health Organization
WNV—West Nile virus

Preface

The most valuable truths are rarely known by mere mortals. Do you exclude yourself from this company? You who incongruously aspire to learn life's freeing truths while your corporal sovereignty and spiritual domicile is used as fodder for corporate corruption and political profiteering? To the "Pirates of the Sacred Spiral" you are a vulnerable mortal enterprise. They have plundered your most precious treasure, and claimed the vessel of your soul. They have buried humanity's most valuable truths with lies and omissions. Savvy they are in swaying, sickening, and conquering civilization. Flesh and blood have slim chance to escape their reach. The pirates now secure life's most empowering map. It guarantees them your wealthiest inheritance DNA the immortal code—the Sacred Spiral.

Noah Webster, a leading Freemason, was privy to metaphysical secrets and spiritual truths. His enduring text defined the word "code" as:

1: a systematic statement of a body of law; esp: one given statutory force 2: a system of principles or rules <moral~><dress~> 3a: a system of signals or symbols for communication b: a system of symbols (as letters, numbers, or words) used to represent assigned and often secret meanings 4: GENETIC CODE 5: a set of instructions for a computer.

What are your dictatorial codes? Are you merely a biological computer? Many "experts" say so. Some scientists allege you are an organic stimulus-response machine simply responding to DNA and blood's encoded messenger molecules. You deserve the right to know if it is so.

Consistent with *Webster's* definition, you also follow forceful laws of government. Some are dictated by science. Others are nature's laws ascribed by most people to a Divine creative source. If you wish to avoid pain and conflict here, or in the hereafter, you simply comply with all these codes of law.

Moreover, you receive behaviorally influential signals from secret places while the alphanumeric of language animates your essence. Your physical, mental, emotional, and spiritual components respond mysteriously and automatically to unseen bioacoustic and unheard electromagnetic forces.

Yet, oddly missing from *Webster's* definition of *GENETIC CODE* is any mention of these messages and signals that enforce universal

laws of physics and mathematics on life through your DNA. Webster simply stated, “genetic code n (1961): the biochemical basis of heredity consisting of codons in DNA and RNA that determine the specific amino acid sequences in proteins, and appear to be uniform for all known forms of life.”(*Webster’s Dictionary*, 1994)

In contrast, remarkable as this may seem, suppressed evidence suggests your genetic code may actually precipitate the entire material universe, and relay messages of Divine consciousness, giving new hope for physical and spiritual salvation to Earth’s mystified masses.

The promise of immortality is encased in your genes medical marketeers say. “Genetopharmaceuticals” are promised to revolutionize healthcare. Fertility clinics boast live births to desperate parents. DNA possesses disease triggers, experts allege, that can be switched “on” or “off” like a lamp. Humanoid cloning can save military casualties. For these reasons and more, people think little or well about biotechnologists conducting risky genetic experiments. Most people are ill prepared to awaken to the most painful truths about this industry, its leaders, their investments, and associated threats to varied life forms including you and the rest of nature.

It is said that human “misery loves company.” Thus, it is everywhere directed by mass mediated misery. Judging by rising rates of divorce, obesity, sex dysfunctions, mood disturbances, children’s hyperactivity/ attention deficit/autistic spectrum disorders, and sales of both prescription and over-the-counter pain killers, few are naturally living comfortably anymore. Most people are suffering and dying from the side effects of corporatist marketed existence; especially choices made in the name of “healthcare.” Iatrogenic (drug and doctor-induced) illnesses now rank among the leading causes of death in the United States a taboo subject for general discussion genetopharmaceutical industrialists neglect to mention this in pursuit of widespread acceptance of their hyped “gene therapies.”

Surely there must be a sane alternative to slash, burn, and poison approach to physical salvation. Where are the cures for cancer, AIDS, heart disease, diabetes, Alzheimer’s, arthritis, and more that pharmaceutical proponents promised to deliver decades ago? Failing to manifest these “miracle medicines,” and despite poisoning and

killing more people than ever with new “FDA approved” drugs with greater side effects, genetic-based therapies are now promised by the same spin-doctors.

Your “reality check” regarding those who control drug and DNA enterprises is desirable if only to save endangered species, plants, and animals threatened by genetic engineering, laboratory mutations, and microbial manipulations. The healthcare industry has played right along with this admittedly dangerous, arguably foolish, business. Most researchers and caregivers know nil about the nefarious history of genetics/eugenics/ and the biotechnology movement. Fiscal facts regarding this industry’s primary beneficiaries have been conveniently restricted. If DNA is so important, learning about it so essential, and manipulating it so necessary, why would we not need to know more about its stewards? Can you really trust these people?

What if *Webster’s* omissions were intended false directions? Suppose your genetic code holds a truth so freeing you would never pop another pill for any ill ever again. It not only behooves you to know “you’ve been had,” but that the greatest secret of DNA is transformational. That is, truthful knowledge about DNA could transform your experience of life leading you to acquire powerful superhuman abilities. Are you interested in co-creating heaven on earth in collaboration with a Divine source? Scientific secrets revealed in this book declare this is your inherent birthright!

Indeed, this book is special. It was written for “intelligent lay readers and above,” precisely like the award-winning national best-seller, *Emerging Viruses: AIDS & Ebola: Nature, Accident or Intentional?* that I wrote a decade ago. In contrast to this 1993 to 1996 effort, which issued from insult and anger over the man-made origin of AIDS, I began to research *DNA: Pirates of the Sacred Spiral* prompted by love for humanity and scientific curiosity. This act of contribution to the Creator and the created, however, was always a collaboration. “Horowitz” was helped by others, some of whom requested anonymity due to the controversial and risky nature of this exposé. Several people helped guide, research, write, and edit this book. They provided directions and subject matter I would not have considered. For this reason, this text was written in the third person.

I thankfully acknowledge the following major contributors: Dr. Fred Bell, whose works link health science and metaphysical esoterics. Fred was instrumental in initiating this project. He approached me in 1998 to collaborate on a second edition of his fascinating book, *Rays of Truth Crystals of Light*. Though I have yet to be able to carry out Fred's request, sidetracked by three other writing projects, his kindness and direction inspired my earliest consideration of electro-genetic expression as it relates to consciousness.

Other personal friends and colleagues who were early contributors included Drs. Lee Lorenzen and Masaru Emoto. They introduced me to electrogenetically influential "structured" or "clustered" water. Dr. Emoto's first book, *The Message From Water*, was inspiring.

Dr. Steve Haltiwanger's heroic efforts in advancing bioelectric knowledge and related therapies requires highest honorable mention. Steve contributed much to this work as you will read in Chapters 5 through 7.

Another deserving honorary accolades is Dr. Michael Hyson. He applied his knowledge of the science of bioacoustics to help dyslexic and autistic children while working with free dolphins. His contribution describing dolphins' sonic healing capabilities is amazing and humbling. Moreover, Michael's collaborator, Paradise Newland, an expert in the fascinating field of "language sculpting," helped edit much of this work, and brought her "aloha" spirit along for the creative journey.

Dr. Gary Tunsy volunteered to research and report on the cloning industry in Chapter 11, "Cloning Around With Life." His skills as a gifted health educator and communicator are readily apparent and greatly appreciated here.

This book would have remained largely incomplete without the brilliant work of Iona Miller and her husband Alan. These doctors spent the better part of four decades pioneering what is finally becoming officially accepted in the genetic world pertaining to bioholographics and neuroelectrified consciousness. Iona's permission to edit or freely reprint large sections of her team's valuable work for inclusion in Chapter 12 was most generous.

Coverage of electrogenetics in this text was greatly inspired by

the awesome research of Dr. Merrill Garnett. His beautifully written book, *The First Pulse*, is essential reading for cancer researchers and others interested in the fundamentals of complete organic bioelectric metabolism and healthy genetic expression.

Many thanks also go to Peter Gariaev, the Russian investigator whose work in DNA-wave biocomputing paved a high speed lane of research into the greatest quietly held truths about genetically-precipitated life, including those in the spiritual domain.

And finally, the late Dr. Stephen Jay Gould must be acknowledged for his unpublished paper “Nano-structured Aqueous Solutions as a Support Base to Optimize Coherent Cellular Communication.” This work came to me through the Internet. Dr. Gould, a famous Harvard paleontologist whose early works argued the evolutionary basis of genetic diversity apparently began to embrace creationistic theory and its underlying science shortly before his death from cancer in 2002.

In essence, as a labor of love, *DNA: Pirates of the Sacred Spiral* does two things well. It slam dunks the notion, using hard science, that we are spiritual beings long before we become physical. This knowledge stands as a tribute to our Creator; a monument to His/Her bioacoustic and electromagnetic forces of creation. Secondly, this book lifts a heavy curtain of deception concealing DNA’s profiteers and power mongers. Given humanity’s current focus on genetics, and the common concerns we face with the rest of nature, I pray this book will inspire your greater appreciation for life and the sanctity of the Sacred Spiral.

A handwritten signature in black ink, reading "Leonard G. Horowitz". The signature is fluid and cursive, with a large, sweeping initial "L" and a long, horizontal flourish extending to the right.

Leonard G. Horowitz, D.M.D., M.A., M.P.H.

Chapter 1.

Introduction to Blood, DNA and the Meaning of Life

“Is not music the food of love?”

Richard Brinsley Sheridan,

The Rivals, 1775

If absolute power corrupts absolutely the “Pirates of the Sacred Spiral” are beyond imagined evil. Most loving and intelligent people cannot fathom what you are about to learn. The pirates, named herein, include the world’s wealthiest individuals, financial institutions, and cartel-controlled multinational corporations. In health science and medicine they prey on people’s blood and ignorance for the power and control. DNA is a major focus for this lust. The “Sacred Spiral” produces physical supremacy, if not spiritual salvation.

These “pirates” navigate global biotechnology markets in quest of this booty. Their captains, like deceptive dictators, direct their crews of scientists and Big Pharma reps. Their battlefields stretch beyond hospitals that have grown monumentally like tributes to medical deities, towering Babylonian temples wherein high science priests and priestesses direct human sacrifices. Rhetoric flows from their forked tongues to mystify the sick and dying. Friends’ and families’ poisoned blood, shed spirits, and sickened environments, issues from their worshipped warships. They wage “welfare” campaigns against social woes, yet humanity is increasingly injured. The economic ransoms collected by these thieves weigh heavily and catastrophically on the common folk. Their mass market is made by media mogals and network magicians. They fare in withheld secrets that, if widely known, would freehave learned how to withhold secrets that, if widely known, would free their capties slaves of fear, ignorance, and physical dependence. Knowledge is, indeed, power! The power of their withheld academic and spiritual truths is so freeing, the

grand global pirate fleet would sink if the average person conceived of their lethal enterprises.

In earlier works, *Healing Codes for the Biological Apocalypse* (Tetrahedron Inc., 1999) and *Healing Celebrations: Miraculous Recoveries Through Ancient Scripture, Natural Medicine and Modern Science* (Tetrahedron Inc., 2000), a Divine plan called the “Covenants of Promise” was discussed in relation to blood a most extraordinary sacred fluid. The word covenant, meaning “contract,” in fact, derives from the Hebrew word *bereat*, which means “to cut.” This implies the shedding of *blood*.

Many ancient cultures, like that of the Hebrews, required animal sacrifices and blood rituals for spiritual purification, even eternal salvation. Christians too, as written in Ephesians 2:12, refer to the shed *blood* of Christ as giving new hope and eternal life to faithful followers. The reason blood is so important is explained in this text in unprecedented measure. The Creator apparently conceived of a vehicle with which His/Her Majestic Essence might be readily transmitted. Blood, the sacred liquid containing the electrogenetic coil, is that instrument for spiritual sustenance. After reading this book, you too will understand why the blood carries such Sacred Spirit, and how DNA the Sacred Spiral expresses Divinity. You will learn that these two body parts, blood, mostly water, and DNA, are precisely designed to deliver Divine love and energetic empowerment to every nook and cranny of your perfectly designed “vehicle of consciousness.”

“For the life of the flesh is in the blood,” records Leviticus 17:11, “and I have given it to you on the alter, to make atonement for your souls. For it is the blood by reason of the life that makes atonement.”

The word atonement here, and in the Bible, has at least three important meanings in relation to blood, bloodlines, and the spiritual enabling instrument called DNA: 1) “at-one-ment,” or becoming *one* with the Creator; 2) “a-tone-meant,” or an *intended*

sound, electromagnetic frequency, or mathematical vibration. These, you will increasingly learn in this book, the bioacoustics of life, precipitate the material body, inspire its bioelectric and biochemical functions, and unifies people with love, that is, Divine resonance, and 3) “a-tone-meant,” or the *meaning* of a tone reflecting the meaning of life as a creative concert of life-sustaining spectrum of sounds, electromagnetic frequencies, and bioacoustic resonances interacting with matter, in this case the human body.

The three emphasized descriptives in the above paragraph characterizing the word atonement form the phrase “one intended meaning.” And this Divine revelation involving blood is, quite literally, the true and complete *meaning of life*! DNA is the instrument through which your Divine destiny, service to others in co-creative processes, and universal Oneness resonates.

Technology for Good or Evil

It is well known that blood contains life sustaining and health restoring properties. What has not been well understood, prior to this publication, is that the blood’s central function, besides delivering the especially Sacred element oxygen throughout the body, is to unify every part of the body with the Supreme Source of intelligence. The symbolic shedding of blood by Christ, restored spiritual integrity and eternal life for His faithful followers. Was this energy or spirit what Adam, or our forebearers, lost due to sin?

The word “sin,” by the way, sources from the early Greek archery term meaning “to be off the mark.” Like most of us, have you been “off the mark” in expressing your Divine inheritance and dazzling perfection?

The Bible tells us Adam’s original sin imparted death; death implied mortality, and mortality evidenced separation from God. Get ready, because we are about to return you to the “Garden of Eden,” thus bringing Heaven to Earth. To solve this mystery, we

will advance scientific understandings regarding the dynamics of Divine reunification for personal and global healing, and for eternal spiritual salvation. All of this revolves around your blood, the sanctity of bloodlines, that is, your genetic inheritance your “Sacred Spiral” and its evolution from Creator to created.

Alternatively, humanity’s blood is currently undergoing mutational disintegration in lethal measure. Due to geopolitical and economic forces that will also be discussed herein, rather than maintaining the sanctity of blood lineage, international blood bankers are delivering contaminants. Infectious agents have, during the past several decades, entered humanity’s bloodstream. Included in this increasingly lethal mix is “mad cow disease” prion proteins, hepatitis and herpes viruses, pathogenic genetic recombinants such as Mycoplasmas viral and bacterial hybrids; toxic fungi, and new immune-suppressive agents such as monkey kidney tissue-derived cancer viruses (e.g., SV-40 and simian foamy retroviruses). These and other bloodborne beasts, genetic mixtures, and microbial menaces, have been scientifically linked to increasingly deadly epidemics. This subject was central to Dr. Horowitz’s earlier books including *Emerging Viruses: AIDS & Ebola Nature, Accident or Intentional?* (Tetrahedron Inc., 1996). As he effectively argued here and in *Death in the Air: Globalism, Terrorism and Toxic Warfare*, many of today’s most lethal germs have been man-made, by intent, to serve as biological weapons for pharmaceutical industrialists, and even population control. Some of them can alter human genetics and bloodlines forever! Sadly, the Bible prophetically warns against much of this.

For reasons that will become more apparent in the following chapters, throughout history political forces, even secret societies, have compulsively fixated on blood as central to their nefarious achievements. Power mongers revered blood. Pagan and demonic rituals evolved around blood sacrifices and blood drinking for spiritual empowerment. Records memorialize the ceremonial drinking of blood from sacrificed animals, virgin

women, and even children, for the acquisition of power. The search for the Holy Grail was conducted because it was believed to be filled with the spiritually empowered blood of Christ. This blood fixation dominated the lives of the Templars, Europe's royalty, including the British oligarchy, and other political leaders.

Today, blood holds the promise of temporal, extended, and perhaps even eternal life. Nazi scientists typed blood stolen from their captives. Blood typing was then used as a means of granting extended life or sentencing Hebrews, Blacks, and other ethnic races to death. On a similarly hideous note, many world leaders have been implicated by several reputable authors, and independent investigators, in abusive occult sexual and sacrificial practices using blood.

Blood worship, in a sense, is practiced by modern science and law. Practitioners in these fields look to reveal the secrets for extending life or, in the case of criminals identified through DNA blood analyses, to determine imprisonment or death.

As mentioned above, largely negligent blood bankers have collected, frozen, stored, and distributed blood for use in emergencies and life-threatening surgeries. Diets, medical deities proclaim, should be predicated on *blood types*.

Indeed, it is by design that "blood work" is central to all healing arts and sciences. The blood contains oxygen-rich red blood cells, and white blood cell body guards. Both are vital to health and longevity, and both rely completely on DNA for power.

Purposefully, the Hebrew name for the original Maker of genes and blood is "Yah-vah," which means "to breathe is to exist." Indeed, the Creator's name relays an important message. It also generates an uplifting frequency, even Holy Spirit. (It is, therefore, other than "doG" spelled backwards as you will better understand from a forthcoming discussion in Chapter 3.) It is the creative breath that delivers oxygen to red cells, and these in turn deliver this critical spiritual element (infinity number eight (8) on the Periodic Table of Elements) to every cell and tissue in the body essential for aerobic energy metabolism and life on Earth.

By Divine design, your white blood cells are central to your immune system. They function like a metaphor for self-esteem and correct spiritual identity. What some people call Divine “consciousness” within your physical “Temple of Yah” precisely reflects the functioning immune system. White blood cells, after all, are those that assess the difference between self and other, normal cells versus cancer cells, healthy host proteins versus invading or infectious agents bacteria, viruses, fungi and more. So if you are estranged from your Creator lacking “Yah consciousness” and accurate spiritual identity that is, you fail to grasp who you are on the highest personal (including spiritual) level, then your immune system ceases to function optimally. Such immune cells frequently fail to recognize the difference between self and other when *their hosts have yet to know who they are as divine beings*. This helps to explain the central importance of spiritual health, and personally-supportive attitudes, on general health and longevity. Once again, this is all mediated through the blood *principally by way of DNA*.

The Truth About DNA and its Pirates

In the coming pages you will learn the truth about what we respectfully refer to as the Sacred Spiral DNA. You will entertain the metaphysics of its creation and function, its myths and metaphors. You will review ancient stories bearing on its profound capabilities. Then you will engage the most advanced science in the fields of genetics, physics, electrochemistry and more to gain a full appreciation of DNA and its value.

In forthcoming chapters, information will be revealed to you concerning the origins of genetic science, the earliest DNA laboratories at Rockefeller University in New York, and the central role this research has played in eugenics and ongoing, more advanced, methods of population control.

You will learn about the extraordinary composition of DNA, its sacred geometry, clustered water matrix, and bioacoustic re-

ception, electromagnetic transmissions, and methods of communication for cellular “up-regulation.” That is, you will learn about the energetic functions performed by DNA upon which every chemical reaction and physical manifestation within cells, tissues, organs, and entire organisms, depends. In other words, you will learn how and why DNA is centrally responsible for manifesting and maintaining your earthly existence. Indeed, DNA is far more than a static blueprint for body building through protein synthesis, as the “pirates” have maintained. DNA the Sacred Spiral is, in fact, the ideal super conductor, and micro-antennae, designed to perfection beyond the reach of the wildest imagination, for physical re-spiritualization.

Given this stunning ability of DNA to function as a receiver and transmitter of virtually the Creator’s love the Divine Cosmic Song and Eternal Sound it is also apparent, based on the most recent scientific revelations, that DNA’s energy signaling is influenced and interrupted by other sources of energy. These include natural electromagnetic frequencies from space, as well as those coming from our own planet. Also, man-made energies such as radio, television, and cellular phone signals can impact DNA structures and functions. All of these environmental sources of energy, including many frequency pollutants, can affect you and your loved ones, both positively or negatively.

The health outcomes of energy signaling simply depends on the intent of the energy whether it serves, foremost, an organically creative function. In politics, you are either part of the problem, or part of the solution. This is, likewise, the case in health science and DNA function. You either provide energy signals and current flows consistent with the wiring of the human organism, or you “fry your circuits.”

Take, for example, your radio or television reception. Like a radio receiver, you either tune it to the correct frequency to hear the music clearly, or else you get disturbing agitating static. The more static energy you receive the more annoyed you become.

Keep it up and you become highly stressed. Go beyond this and you will become psychotic.

Alternatively, you can be healed by tuning into energy frequencies that are consistent with the natural tuning of your organism, that is, the way in which your DNA and cells have been fine-tuned by nature, or the Creator, to receive and interpret energy signals. In short, your DNA is both a crystal receiver and harmonic player developed to perform symphonies transmitted by a Divine orchestra.

This subject will be presented in more scientific detail when we consider genetic environmental interactions.

Given the information in the forthcoming chapters, you will likely concur with our conclusions. The lessons of DNA and environmental interaction, once learned, would provide the intelligence needed to regain freedom from the ignorance currently used to control populations. We will furthermore detail documented projects, conducted by the U.S. Central Intelligence Agency (CIA) and other untrustworthy institutions, that have been developing such covert capabilities for mass mood, behavior, mind, and genetic control. The realm of genocide through genetic expression for disease induction is pertinent to these discussions and the pirates' prowess.

The issues related to genetic engineering for good versus evil also engage the topic of genetically modified organisms (GMOs). These range from microbes and manipulated meals to entire human clones. These subjects too will be covered in the forthcoming pages.

More esoterically, such critical genetic laws and political determinations might be held in a prophetic scriptural context. Revelations of Bible codes in recent years, such as those found in the Book of Genesis (i.e., "GENE-Isis"), relay warnings and data concerning the need to understand how pure original DNA serves our global and universal ecology. This subject, too, will be brought to the forefront in this text. DNA, its sacred geometry, and its meaning for life lived with a greater spiritual sense, will be closely examined.

Finally, there are many yet to be answered questions and po-

litical urgencies surrounding DNA that we advance in this book. The Human Genome Project and Genomes for Life Project are two controversial topics tormenting to these authors. Who is really behind these projects? Where and why have they begun? What may be achieved? Is there a dark side to these genetic determinations to which the public was never privy? Could recent scientific and technological advances achieved by these vast enterprises be used deleteriously without the public's knowledge or consent? If so, how might space-based or land-based electro-genetic frequency weapons be developed and deployed? Have there already been efforts made in this domain? The answers to these questions may surprise you.

Regarding the "Pirates of the Sacred Spiral," many mischievous activities have centered at The Institute for Genomic Research (TIGR) in collaboration with leading globalists and pharmaceutical industrialists. Dr. Horowitz's earlier investigations exposed these formidable threats as leading suspects in the anthrax mailings, and worse. To the time of this writing, the Federal Bureau of Investigation (FBI) has maintained the source of these mailings a mystery. You will learn why. Evidence will be presented linking the Pirates of the Human Genome Project to the individuals and institutions underlying various genocidal atrocities that have been committed under the guises of "public health" and/or "national security" during the past century. The individuals and institutions that have served this darker side of DNA research, technologically steeped in the planet's medical, pharmaceutical, and petrochemical industries, are hereby exposed for those who care to serve justice.

These data may help explain current geopolitical trends and economic agendas, from the growing reliance on genetically modified consumables, and increased risk of bioterrorism, to medical and pharmaceutical "advances" alleged to address emerging diseases. You will discover that the pirates and their close associates profitably play with mutating microbes, related

disease epidemics, and exploding rates of man-made illnesses including cancers.

In the prehistoric era, cavemen and women sought to control fire and light for their heat and sustenance. Today's focus on DNA by wealthy global industrialists is the same. Besides genetic scientists and pharmaceutical industrialists, energy industry executives power brokers know that DNA is the central processing station for human electricity and evolutionary destiny. If "knowledge is power," revealing its secrets is the key to personal empowerment, spiritual evolution, and even planetary salvation. This best explains, as you will shortly learn, why the world's most powerful energy industrialists direct the Pirates of the Sacred Spiral.

Chapter 2.

DNA and the Bock Saga

“Just as my fingers on these keys
Make music, so the self-same sounds
On my spirit make a music, too.”

Wallace Stevens,
Peter Quince at the Clavier, 1923

Among humanity’s greatest challenges is “the effort it takes to adopt new perspectives,” wrote Australian author and spiritual teacher Les Whale. “It is not easy to use old belief systems to steer a course towards the best possible future.” His article on the “Bock Saga: An Ancient Time Capsule” appeared in the June/July, 2002 issue of *Nexus*, the Australian journal directed by Duncan Rhoads an internationally respected purveyor of suppressed truths. It was Duncan who initially broke the HAARP story for international readers. (Whale, 2002)

HAARP, the High Altitude Auroral Research Project, you learned in previous books, was not a musical instrument designed to play Divine symphonies. If anything, it is an instrument for altering potentially numerous things from the weather to human behavior. (Horowitz, 2001)

HAARP was developed by the Atlantic Richfield Oil Company, ARCO, in collaboration with the United States Government’s Department of Energy (DOE). It has been avidly discussed by Alaskan medical investigator and co-author of *Angels Don’t Play this HAARP*, Nick Begich. (Manning and Begich, 1995) Dr. Begich also contributed to Dr. Horowitz’s pre-9/11, 2001, prophetically titled book, *Death in the Air: Globalism, Terrorism, and Toxic Warfare*. (Horowitz, 2001) As noted in these sources of intelligence, this global energy director Anglo-American gov-

ernments prefer to call an experimental “atmospheric heater,” is ultimately controlled by the Royal Family of Britain through their subordinates. This family, and the European-based bankers that largely control the British monarchy, you will learn, occupies a central sphere of influence among the “Pirates of the Sacred Spiral.”

Previous books also linked HAARP to several nefarious undertakings besides the potential beaming of electromagnetic frequencies directly into human DNA for disease induction and mass population control. In forthcoming chapters this potential is further explained. Naturally this outcome largely depends upon the genetic predisposition to disease activated by these signals.

Likewise important are individual risk factors posed by illness producing lifestyles and environmental toxicities. All of these risks, exposed in *Death in the Air: Globalism, Terrorism and Toxic Warfare*, are best explained by considering the contemporary application of “non-lethal warfare” in which propaganda plays a major part. Included here is the exposure of targeted populations with combinations of chemicals and biologicals that the public is psycho-emotionally directed to endorse. (Horowitz, 2001)

“This challenge is constantly in conflict with established belief systems relating to our past, present and future,” author Whale continued, “for these belief systems are the central wheels of the academic hierarchy, involving all aspects of humanity including religion.” (Whale, 2002)

Indeed, the mass mind rests largely assured concerning the government’s general benevolence towards We the People. If HAARP, or other admitted governmental projects were offensive, “Big Brother” would engage the threat. At least that’s what most people wish to believe. Newsworthy items like the Central Intelligence Agency’s (CIA’s) use of electromagnetic frequency weapons, drugs, and shock “therapies” to investigate and facilitate mind control and population manipulations gets very little

press to date. We perceive ourselves as insulated against such abuses or attacks by both law enforcement officials and the “independent media.”

“Many of us are only just coming around to the realization that civilization was indeed thriving and highly evolved in our ancient past,” yet, throughout the millennia, dark forces consistently arose to control such developments. “With each day that passes,” Whale wrote, “and each new discovery that comes to light, the truth of this political coercion and population manipulation is more and more difficult to ignore or deny.”(Whale, 2002)

Whale’s *Nexus* article asked readers to consider the modern practice of burying time capsules to send future generations information and artifacts reflecting modern times. Likewise, he documented, ancient civilizations did the same in ways ranging from stone carvings to story telling. Later you will learn how DNA apparently functions similarly. Buried information resides in DNA’s water matrix in its crystal hydrated lattices perhaps for even millennia, to eventually reveal to its holder ancient ancestral memories, even personal history and experiences.

The Bock Saga relays one such story intimately related to this book *DNA: Pirates of the Sacred Spiral*. Despite its origin dating back more than 50 million years, “according to the Saga,” Whale wrote, “it was decreed over 10,000 years ago that the surviving Bock family would release the information in 1984, and not before. It was perceived that by this date, human genetics would once more have the capacity for understanding and integrating this knowledge, wholeness, and oneness. This would enable people to live in harmony with nature, and each other, and therefore properly utilize the wisdom.

Reflecting on George Orwell’s *1984*, it appears the Bock family’s faith concerning the maturity of human DNA was somewhat misplaced, in the general political sense. This prematurity of spiritual readiness is particularly apparent when reflecting on

secreted projects like HAARP and the CIA's Projects MKULTRA and MKNAOMI. These later projects involved biological, chemical, and electromagnetic population controls.(Horowitz, 1998; 2001; Horowitz and Puleo, 1999) Rather than learning to live in harmony, that is, living a meaningful life of service, during the past few decades generations have witnessed the ongoing degradation of the planet's ecosystems, depletion of natural resources vital to various species' survival, including air and water pollution and many new arguably meaningless wars. Besides this, a constant barrage of agitating communications emanate from our mainstream sources of intelligence. All in all, these symptoms of a global disease process seem far removed from any provable conspiracy. Generally, people seem most willing to believe each assault on human health and the planet's integrity is serendipitous rather than calculated.

Even in the face of these shortcomings, the Australian teacher reasoned, if the Bock Saga is true, as time will surely tell, this knowledge what has become myth holds tremendous hope for our civilization, and those of our progeny.

The Bock Saga involves DNA, as well as the spiritual context of this matter advanced by our latest scientific understandings concerning DNA's bioacoustic and electromagnetic functions.

The Bock Saga

The modern emergence of the Bock Saga began in the 1980s in an area near Helsinki, Finland. Here a group called The Positive Foundation began to excavate a site wherein the remnants of Lemminkäinen's Temple was found.(Whale, 2002)

Lemminkäinen, according to a play entitled "The Kalevala, a Finnish Epic" (based on Ursula Synge's *Land of Heroes: A Retelling of the Kalevala*), was an ancient times hero a Blacksmith who miraculously "forged heaven itself," and "made the foundations of the air."

Another friendly hero, Väinämöinen, visited the saga's antagonist Mistress Louhi to compete with Lemminkäinen for her daughter's hand in marriage. Lemminkäinen was an impressive suitor. His songs were said to weave the universal ethers into all sorts of matter. According to the play, the great mystical creator, Lemminkäinen, failed to win the marriage contest.

"According to the Bock Saga," Whale wrote, "within the Temple's hidden halls there is to be found a repository of human knowledge and existence on our planet dating back millions of years."

The Bock Family Treasure

Ior Bock, born in 1942, was the last remaining son of the Bock dynasty, at the time Whale wrote. He was still alive.

According to Ior (pronounced ee-or), the Saga was largely based on the memorization and performance of sacred sounds. These were heard and experienced from generation to generation. "Each descendent was taught from the age of seven to the age of 27, based on his communications with Ior. "It took 20 years to comprehend and master this" vocal and intellectual tradition.(Whale, 2002)

Throughout most of his young adult life, Ior gained livelihood as the head guide of the Finnish Museum Fortress of Viapori in Sveaborg. "In the summer of 1968," Whale told, "Ior made his first academic presentation at the museum. In the years that followed, he became a very well known and respected historian," and involved himself in the development and production of a number of television documentaries.

Whale detailed the controversial emergence, in 1984, of the Bock family saga by Ior, and wrote that it almost cost Ior his life. At first, Ior's stories were "met with a great deal of disbelief." He was accused of making the Saga up. In 1999, he was stabbed in the back a number of times by a lone attacker at his sister's apartment in Helsinki. His heart stopped for several minutes be-

fore paramedics managed to revive him. The stabbings left him a quadriplegic. Yet, he continued to tell the Bock Saga. “His mind is still very clear and he smiles, even though nearly all that he had has been taken from him,” Whale reported.

Many of Ior’s early detractors “are now reconsidering their position due to the astounding and significant discoveries made over the past few years, discoveries which seem to confirm that the Saga is indeed based on fact, not fiction.”(Whale, 2002)

Sounds Like the “Healing Codes”

As you will learn in greater detail in the next chapter, by 1999, Dr. Horowitz published a book that presented much of this ancient arcana presented in Bock’s Saga, yet drawing from the King James Bible. The book *Healing Codes for the Biological Apocalypse* is an amazing text that for the first time in at least 3,000 years recovered and revealed to the public six specific frequencies of sound associated with all creation. The creative, destructive, and miraculous manifesting power of the King of Kings is mediated through the spoken word, sounds, and music. These revelations initially came from the Bible code in *The Book of Numbers*. Ancient Levi priests, well studied in Pythagorean mystery school math, included the numerical sound frequencies in the verse numbers. The numbers related mathematically, harmonically, and by definition in *Webster’s Dictionary*, to the prophesied gathering of 144,000 humble servants of God, to be assembled in the End Times to *sing* Yah’s praises in such a way as to instantaneously, and miraculously, deliver this entire planet back from death’s door.

Later, renowned musician and spiritual teacher, Jonathan Goldman, contacted Dr. Horowitz with a question. “Are there three notes missing from the ancient Solfeggio scale?” he queried.

“Indeed there are,” Dr. Horowitz replied. “In Pythagorean math, nine is ‘completion.’”

Taking the original six tone revelations, Dr. Horowitz extrapolated the final three by simply following the Pythagorean pattern advanced in the column of three digit numbers. This revealed a total of nine notes that Dr. Horowitz called, "God's perfect *circle* of sound with all nine tones harmonically linked to the 144,000 number."

Using this knowledge, Jonathan Goldman produced an amazing studio production called *Holy Harmony* a compact disc recording that relays each of the nine tones forming a ring of sound. He combined Gregorian chants with tuning forks specifically milled to the exact frequencies of the ring. Most people have called their listening experience extraordinary. The third tone, 528Hz, is used by some of the world's leading genetic biochemists to repair damaged DNA.(Horowitz, 2000; Goldman, 2002)

Bock Saga and Secret Sound of DNA

Approximately three thousand years ago ancient Levi priests translated the original Torah into the Greek Septuagint. At that time, they developed the chapters and verse numbers found in today's Bibles. They used these numbers to encrypt these six sacred tones. Only those privy to this sacred secret knowledge could access the numbers. The tones provided powerful vibrations electromagnetic frequencies now known to impact DNA.(Horowitz and Puleo,1999)

Science has now embraced what the Bock Saga foretold the understanding that the primary function of DNA is in relaying wave-particles of sound and light (i.e., phonons and photons) throughout the organism. This is how, for instance, homeopathic medicines, and even Bach Flowers, have been known to elicit very rapid, virtually instantaneous, responses from experiential to physical affects. The electromagnetic frequencies of sound and light received, and then transmitted through the DNAstructured waterprotein crystal-lattice complex, are the only mecha-

nisms that can account for these successful and widely observed phenomena. This is covered at greater length in the next chapter under “How DNA Works.” According to the Bock Saga, humanity has only recently re-evolved to comprehend this basic understanding. “It is, therefore, understandable that the Saga should come to light at this time,” Whale wrote.

“The Saga deals with a sound system that was utilized and understood in complete detail many millennia ago technology based on light and sound that also incorporated a spiritual understanding of how to work with “nature orally,” (i.e., “naturally”). But somewhere in the darkened mists of our past, that knowledge was lost and, therefore, so was our ability to utilize it.”(Whale, 2002)

An additional revelation was advanced in *Healing Codes for the Biological Apocalypse* by Dr. Joseph Puleo, and by Dr. Horowitz in his video production by that title. This involved the “alphanumeric” of sound. Dr. Puleo determined that all of the letters in the English language were perfectly reflected in the Pythagorean number skein. In other words, each English letter had a corresponding number.(Horowitz and Puleo, 1999) Dr. Horowitz later surmised, after integrating the “reverse speech” theory of David John Oates,(Oates, 1999) that the English language was alphanumerically related to the spiritually empowered Hebrew, Sanskrit, and Aramaic languages, *but backwards!*

Whale continued to relay relevant details linking the Bock Saga, the oral tradition of these musical teachings, to the alphanumeric of sound like those described by Drs. Puleo and Horowitz:

The Saga, given as an oral transmission, conveyed and maintained in correct form, via the Ring, the *alphernas beten* or alphabet, the *kela* of sound. The alphabet is in the origin Rot (pronounced *root*) language and the Van (Finnish) language. The teachings reveal a natural sound code within the language, which contains and retains keys of information. The sound system creates an internal logic within the

Saga. It is understood that this system creates an encoding within the brain that triggers genetic memory. In this way, the narrator of the Saga transmits the information, thus enabling the listener, after 20 years of learning, to take the Saga forward.(Whale, 2002)

Likewise, Dr. Puleo prophesied in *Healing Codes for the Biological Apocalypse* that certain “matrices of thought” could be opened up, and the human mind’s link to spiritual realms expanded, by simply receiving, reviewing, and then using the Pythagorean patterns of math and/or these sounds. The ancient Solfeggio scale he explained, used in the original Hymn to St. John the Baptist, was reputed to hold the power to “uplift mankind to ‘Godkind.’”(Horowitz and Puleo, 1999)

Similarly, Whale noted, “contained within the word *saga* itself *sa* meaning ‘receiving’ and *ga* meaning ‘giving’ in both Rot and Van languages is an understanding that one must first receive before being able to give” the gift of spirit. This is, in fact, precisely what DNA does. It receives the gift of spiritual life in the form of sounds, and then transforms these tones to light energy signals (i.e., photons). These photons transmits outward from the Sacred Spiral to impact organic matter, including your material makeup.

The “Holy Grail of languages,” Whale added, one small part of the majesty of the *kela* of sound, could yield humanity’s physical and spiritual salvation. “Human history, philosophy, health, well-being and, most importantly, the understanding that we are all one, are critical parts of these teachings,” Whale wrote about the Bock Saga. “In antiquity, at a time when this knowledge was common, there existed a communal philosophy: one breeding, one information system, one giving system, one Ring, which created health and well-being.”

This is all closely tied to DNA, the “Healing Codes” composing “God’s perfect circle of sound,” and its primary functions creation, destruction, and miracles. Until recently, this knowledge was obviously hidden from the masses by a privileged few “Ring Lords.”(Whale, 2002; Goldman, 2002)

The Origin of Civilization According to Bock

The Saga is a mythical mystery “so huge that it defies description,” wrote Whale. Best known as the Vainämöinen and Lemminkäinen mythology, this knowledge proposed that humans evolved from the animal kingdom due to naturally occurring hybridizations, or genetic experiments. Sounds and music were believed involved as goats and monkeys mixed to crossbreed mankind. According to Ion Bock, this occurred during the “Paradise time,” which preceded the age of Atlantis, the time following Atlantis, and the current “New Times.”

Why goats and monkeys, one might ask? This sounds absurd unless one considers the theological alchemy. This concept bears certain similarities to Darwin’s theory of evolution and Judeo-Christian theology.

Darwin suggested that man evolved as a result of genetic mutations and survival of the fittest. In science, monkeys and chimpanzees have been routinely used in most advanced genetic experiments.

When considering survival of the fittest, the subject of competition, the hunter versus hunted, or the eternal battle between good versus evil, comes to mind. Perhaps serendipitously, the “goat” in *Webster’s Dictionary* includes by definition, “the licentious man,” or someone lacking in legal or moral restraints, “marked by disregard for strict rules of correctness,” “especially disregarding sexual restraints.” This is symbolized by a principle Satanic symbol the “Baphmet” or goat’s head. Another sheep relative, the ram has traditionally symbolized the alpha male the leader of the species.

Also, the Baphmet that adorns the cover of the “Satanic Bible” depicts a goat’s head with a man’s body. This is also commonly used to symbolize Satanic power in the occult.

Given the above, it is easy to imagine, monkeys from whom man was said to originate in the image of God and goats, sym-

bolizing the darker side of man, combined to form the genetic basis for our current human species a hybrid actualizing good and evil.

The Saga left out who, or what, conducted the initial genetic experiment(s). (Whale, 2002)

Author Les Whale continued his interesting discussion regarding the “origin of humanity.” The Saga held that creation “occurred around the North Pole, where the Sun circled and never set.” Around the Pole was “a land that became the ‘Motherland’ . . . [and] at its center was ‘Hel,’ meaning “clear,” “home,” and “complete.” The Motherland was called Odenmaa or Uudenmaa, from which the phrase garden of Eden or Eden derived. This home of the world’s first people was described as a tropical paradise. The Saga purports this region to currently be southern Finland.

Human beings were known as *pi-pol* (pronounced *pee-pol*, or people). All knowledge, Ion Bock stated, could be understood “within the Pol and the Ring.” “Ringlands” were established on the outskirts of Uudenmaa where the Vaner people lived. “Their language was Van,” Whale reported, “meaning ‘One.’” Curiously, the binary mathematics used primarily in physics and computer language is based on 0 and 1 a ring and a pole, or a “One” and a “Ring.”

The philosophy of unity was central to the Vaner culture. “Within the *kela* of sounds which make up the Rot language was the knowledge of how to be one with nature and our *plan-et*, *plan* meaning ‘plan’ and *et* meaning ‘family’ a family plan to create wholeness,” Whale wrote. “Men and women were equal. The man had *his-story* (history) and the female had *miss-story* (mystery). (Whale, 2002)

Integrating the concept of God, the Bock Saga held that Oden also entertained knowledge of the Court of Aser. Yehova meaning “give to the Court of Aser” was in Uudenmaa. “Hel” (or Hell) was at the center of this tropical garden. Whale reported that this

knowledge was considered necessary for a healthy and complete life. “The name Yehova was eventually changed to Jehovah,” he wrote, “and ‘God [implying good] within became ‘God in Heaven.’”(Whale, 2002)

Whale contrasted the life in Oden for the Vaner people with more modern Judeo-Christian traditions. He made special note of the cultural differences regarding the sexes with reference to certain genetic and evolutionary ideas. “From the beginning of Christian times,” he wrote, “the heathen system (and all it represented) was hunted down and removed or destroyed. Women were excluded from this new system because much of the *miss-story*, the female mystery, had become *taboo*, *ta* meaning ‘to give’ (to germinate the seed, which is feminine), *b* standing for *borg* (meaning *cast-el* or ‘castle’), the breeding system, and *oo* representing Oden the Sun and knowledge to make things grow healthy.

Other authors, including Dr. Joshua Hovey in this text, have correlated certain aspects of DNA, mathematical sequences found in *The Book of Genesis*, what we generically call “biblical genetics,” and certain aspects of cosmology and the lunar cycle. The Myan calendar, for instance, in contrast to the more modern Roman calendar, according to advancing research, also relates to genetic sequencing according to some authors.(Hovey, 2002)

“Under the heathen system,” Whale continued, “Shiva represented the energy of the Sun reflected by the Full Moon once a month; and the knowledge of the Moon and monthly cycles. The male and female essences *sperma* and *sav* were regarded as *whol-i* (holy), and when respected and shared correctly they created a healthy genetic mix, and whole *i-moo-en* (immune,) meaning ‘in the mouth’ system.”

Here, in ancient mythology, is the relationship between genesis, genetics, and the spoken word. Also implied is the concept of wholistic health hinging on oral functions.

Neurophysiologists teach that one-third of the sensory-mo-

tor-cortex of the brain is devoted to the tongue, oral cavity, the lips, and speech. In other words, oral frequency emissions (i.e., bioacoustic tones) spoken, or sung, exert powerful control over life, vibrating genes that influence total well-being and even evolution of the species.

All of this, according to the Bock Saga, and the Bible, largely depends on words from the lips syllables of language and underlying alphanumerics and/or Pythagorean mathematics. (Horowitz, 2000)

Along with modern Judeo-Christian theology, Whale argued, “the original importance and meaning of the [creative] language was changed, lost or corrupted.” Under our contemporary ideology, and modern culture, “respect for and sharing of sperma and sav became taboo in other words, restricted and forbidden. . . . Instead of sperma and sav being honored, they became ill-used and wasted . . . Women were denied their natural worth and equality. . . . Men and women could no longer understand history and mystery to assimilate the seed of knowledge. . . .” As a result, much like the story of Adam and Eve, humanity declined in its ability to co-create wholeness and harmony with the Great Creator in Oden.

In the next chapter, you will see how these basic myths and theologies have carried over into modern science in the realm of genetics and DNA expression. You will see more clearly how this same concept of sounds, emanating from the lips, carry creative energies as seen with prayer and appreciated in Judeo-Christian theology, spiritual healing practices, and electrogenetic science.

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Chapter 3.

DNA and the Myths, Metaphors and Metaphysics of Creation

“There are undoubtedly all kinds of sounds in the world, and none is altogether meaningless; . . . These are the things we are talking about when we avoid the manner of speaking that human wisdom would dictate and instead use a manner of speaking taught by the Spirit.”

1 Corinthians 14:10 and 2:13,
The Holy Bible

Advancing science places Biblical verse in the context of modern physics. In this chapter, DNA is considered in relation to original Judeo-Christian tenets of creationism. This discussion of the physics of creationism expands on Dr. Horowitz’s earlier work *Healing Celebrations: Miraculous Recoveries Through Ancient Scripture, Natural Medicine and Modern Science*. From here, the science leads us into the metaphysical domains of DNA and its electrogenetic components. This more “New Age” orientation draws partly on the research of Dr. Fred Bell, and other leaders in this controversial field of study.

Star Trek fans rejoiced when Bones waved a little electrical device over Captain Kirk’s ailing body and, seconds later, his wounds were healed.

That is close to where we would be in healing practices around the world save for powerful Pirates of the Sacred Spiral, who you will be introduced to shortly. As a result of their political, educational, and financial tinkering, the most promising fields of electromedicine and electrogenetic research have been stymied and/or biased to say the least.

Dr. Horowitz found this especially aggravating during his early attempts to integrate these advanced disciplines while on Harvard's dental faculty in the early 1980s. A colleague of his a department chairman walked by him at a social gathering quacking like a duck to mock his knowledge and dedication to these academically forbidden concepts.

Likewise, this narrowmindedness disturbed people who read *The Science of Coercion* (Oxford University Press, 1994) by Christopher Simpson. Simpson studied psychological warfare methods used on health scientists and academicians from 1945 to virtually the present. He concluded that if you were a scientist or healthcare professional who thought outside the "box" built by the Rockefeller establishment among the leading Pirates of the Sacred Spiral then you were traditionally demoted, defunded, and ostracized. Those who have consistently bucked academic "tracking" have witnessed this repeated persecution.

An early example of this was the pioneering obstetrician and infection control enthusiast, Dr. Ignaz Semmelweis. Published in 1847, Dr. Semmelweis observed that puerperal fever, more commonly called "child bed fever," was killing a huge percentage of newborns. He associated this tragedy with the fact that many of his colleagues were doing autopsies in the morgue prior to performing obstetrics in their delivery rooms. He observed that doctors and midwives simply neglected to wash their hands with chloride or lime, and clean their bedsheets for patients before proceeding with their deliveries. He studied and then promoted his rational level of infection control as a simple preventive against puerperal fever. Though today he is considered among the greatest heroes for his contribution to infection control practices, in his day he was professionally ostracized, persecuted, and when he kept giving, he was forcibly institutionalized for alleged lunacy.

More modern examples of this bizarre, if not inhuman, suppression of rational decency within the medical scientific com-

munity include the American doctor Stanislaw Burzynski in Texas, for his alternative approach to cancer; Dr. Basil Wainwright who was incarcerated in the United States for “practicing medicine without a license.” Upon his release, the past president of Kenya, His Excellency Arap Moi, drafted Dr. Wainwright to fight HIV/AIDS in Kenya with good results. Dr. Wainwright’s “AIDS cure” involved mechanized oxygenation of blood.

Dr. Hulda Clark was arrested coming back into the United States after practicing in her cancer clinic in Mexico. She is recognized as a most advanced theorist in alternative medicine, and her thousands of healed “terminally ill” patients endorse her seemingly bizarre ways and means.

Numerous others have been arrested or persecuted for providing successful, low cost, low risk, alternative healthcare solutions for terminally ill patients.

Thus, Simpson concluded, control has been maintained from the top down all these years through *The Science of Coercion*.

The Judeo-Christian Account of Creation

A more uplifting direction for healthcare was exemplified by the Christian Messiah, Yeshua, when, after a forty-day fast, he implemented a magnificent healing ministry initially called “The Way.” How does the Creator perform such healing miracles, he questioned his loyal followers? It is by way of your faith and trust in the Creator that you are healed, he instructed his followers refusing to take credit himself. How was this half man who came in the name of his Father able to touch people and have them miraculously heal? Equally relevant, routinely when you go to sleep feeling tired or sick, how and why do you wake up in the morning feeling better or completely refreshed?

The Book of Genesis (1:1-9) provides a few hints: “In the beginning God created the heaven and the earth. And the earth was without form, and void; and darkness was upon the face of the deep. And the Spirit of God moved upon the face of the waters.

And God said, Let there be light: and there was light. And God saw the light, that it was good: and God divided the light from the darkness.” That is, God divided “between the light and between the darkness,” explains the amplified notes in the original *King James Bible*.

From a scientific perspective, what might this all mean?

Study the multidisciplinary fields of genetic science involving DNA, its physics, water chemistry, hydromechanics, bioacoustics, electromagnetics, and remember electrochemistry. It also helps to understand a bit about Pythagorean mathematics, the alphanumerics of language, Cymatics, spirituality, and scripture. Through electromagnetics—Yah’s technology that underlies spirituality and Divine healing—all of the above miracles are possible and the answers are largely explainable.

The above Bible quote says that the Universal Developer created through the spoken word. What is word, but sound. What is sound, but electromagnetic frequency transmission. What’s that? Simply mathematics and physics acting within a malleable etheric matrix containing positive and negative charges in quantum space or subspace.

The Bible calls this formative matrix the firmament. And if the earth existed in this formative matrix, but was first there without form, and void, and dark...,” then in electromagnetic space (i.e., the quantum field) and/or the vacuum of subspace, the etheric image of Earth existed before its physical precipitation and material manifestation. Genesis records, “And God said, Let there be a firmament in the midst of the waters, and let it divide the waters from the waters. And God called the firmament Heaven. . . .”

Have you ever thought about dividing water like Moses is said to have done? Better yet, have you ever tried this feat in the ocean like the Creator is written to have done? Scientists and nanotechnicians are doing this routinely now with structured water in special water science laboratories around the world. We

will introduce you to a few of them in the pages ahead. They prove daily that there are hidden forms of water within water. Furthermore, they observe that water materializes or “clusters” due to some energetic, or even Divine, atmospheric or universal force. The Bible calls it “Heaven,” which therefore is all around, even *within* you since structured or clustered water is a most important part of your DNA.

These brief Bible verses should also give you some indication how vitally important water is, the elements of hydrogen and oxygen, in the creation of all life, and all spiritually-manifested experiences. Water is, the Bible tells, the closest thing to the creative matrix, or firmament. The closest thing to Heaven! The material moved by the Creator for all creation.

Water (H_2O), as you likely know, is composed of two parts hydrogen and one part oxygen. The Bible holds that our earth, and life as we know it, came together *after* these elements formed water. So, Yah first moved these elements to begin everything, including the first light!

Then, a further fundamental distinction was created when He/She divided the light from the darkness to create the day versus the night. Do you think, then, there might be a spiritual or energetic distinction between what happens to the water on earth and in your “Temple of Yah” when day transitions into night? You bet there is! It’s called sleep, and the molecular biology of Divine restful communion is highly healing.

The advancing physical sciences provide insight into these fascinating questions. Linking Book of Genesis and oxygen to the first light, as the Bible does, makes scientific sense. After all, natural light comes from the sun. According to solar experts, the sun contains more than 99.8% of the total mass of our entire solar system! Furthermore, researchers record about 75% of the sun’s mass is *hydrogen* and 25% is helium which is composed of 92.1% hydrogen by number of atoms. Everything else, including metals, amounts to only 0.1%. This changes slowly over

time as the sun converts hydrogen to helium in its core. So the initial creative element, and sole element responsible for light, is hydrogen the same hydrogen that forms the majority of every water molecule. (See: <http://www.deepspace.ucsb.edu/ia/nin-eplanets/sol.html>)

Quantum physicists study the creation of light by rearranging electron particles in orbit around elements such as hydrogen and oxygen. They further deduce the space between subatomic particles is much like a firmament of ether the electromagnetic multidimensional background matrix into which creative mathematics, that is, a sacred powerful language, energetically moves and apparently even bioholographically precipitates matter.

Additional hints of this dynamic creative process engaging space and energy, time and relativity, is provided in the amplified meaning above describing Yah's division of light from darkness. It says, "between the light and between the darkness." Obviously this is referring to layers or levels of different energies/mathematical-frequencies within light and within darkness. These sound and light frequency levels maintain unique distinguishable activities. They are generally electromagnetic entities engaged at levels of water, light, and darkness that are difficult to see or feel; yet, they have a profound affect on your entire organism, including your energy, spirituality, sleep states, behavior, and even consciousness.

Recall, for example, full spectrum white light can be broken down into all the colors of the rainbow except pitch-black, which is the darkness, that apparently maintains its own unique subordinate levels and layers within layers. Many people become ill due to reduced exposure to full spectrum lighting. In areas of Alaska, for instance, "seasonal affective disorder," or SAD, is endemic due to very short periods of Winter sunlight. If the light "is good," as The Creator says in Genesis, the absence of it is not. This darkness, or missing creative energy, induces hormone changes, depression, stress and illness.

In summary, the electromagnetic frequencies associated with the Creator's voice, using the simple language of math underlying each utterance of Divine order, powerfully directed the elemental forces of water, hydrogen, oxygen, light, darkness, and more, to crystallize or precipitate all matter, including you.

The Key Electromagnetic Element Hydrogen

Hydrogen, as introduced above, is centrally important to life and health. Your body, when properly hydrated, is more than eighty percent water. Most of that is elemental hydrogen. Dr. Fred Bell explained the earth's cyclical rotation on its axis in relation to the sun, and the hydrogen atoms in your body. The vibrations, the frequencies, the music of these special elemental spheres all change their inherent energy states during transitions through day and night.

In *Rays of Truth Crystals of Light*, Dr. Bell asserted the science of atomic hydrogen as most sensitive to sound. Assuming that the Creator's orchestra is always playing love concertos, when a human enzyme group, for instance, is struck by sound, much is achieved. Enzymes direct and empower every metabolic reaction in your body. When the Sacred Sound "is close to the right frequency of the body and vibratory rhythm, the hydrogen atom facilitates energy to enter your body. Your body of course, receives the energy as the motion, rotation, and frequency of the hydrogen atom.

"In the morning, . . . as the sun rises, the energy comes from the astral plane into the hydrogen atom. It's various frequencies shower the hydrogen atom like a rainbow. The red end of the spectrum rainbow reaches the nucleus of the hydrogen atom, and the other end, which would be violet, is felt strongly by the electron the outer perimeter revolving particle with a smaller mass. The hydrogen atom is more than a proton and an electron which this rainbow energy animates.

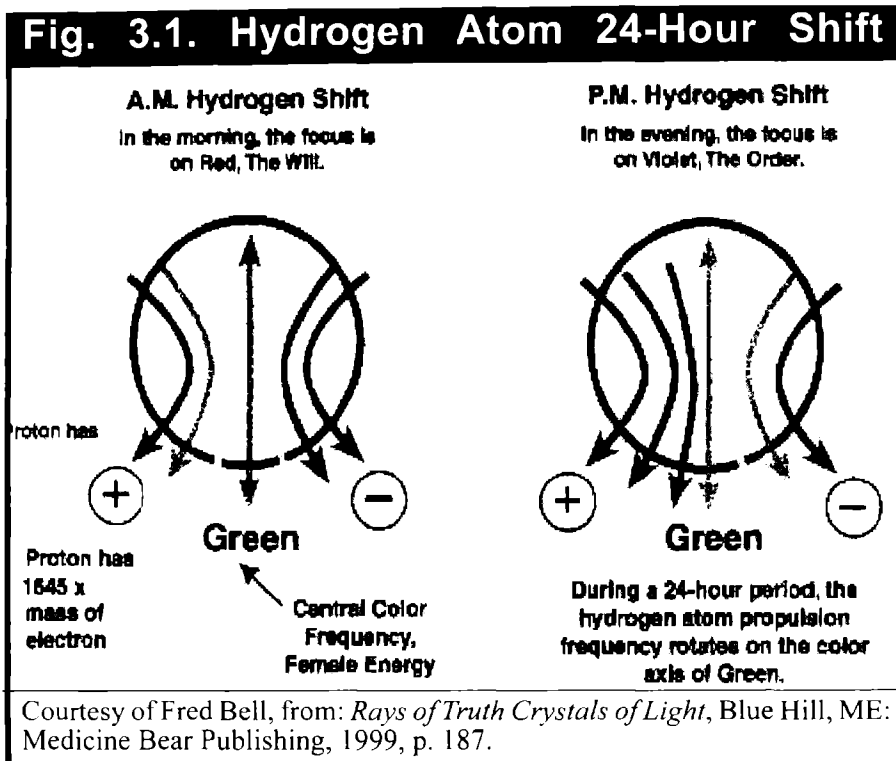
“If you look at the hydrogen atom,” Dr. Bell continued. “and its distribution of mass, you will learn something about consciousness. The proton, or center of the hydrogen atom, weighs 1,640 times more than its orbiting electron. Therefore, beingness will be affected more by the heavier mass of the center than it will be by the lesser mass of its orbiting electron. However, the orbiting electron is moving faster, or vibrating, at a slightly higher frequency. When an object is in motion, its energy increases proportionately to its speed, and its outer mass decreases. It can begin to act as a carrier vehicle for other energies. . . .” This is how the human being is spiritually animated, and this is precisely a primary function of the hydrogen atom. It carries etheric energy or spirituality into the cells with which it has merged.

“In the morning when Red, the ray of will, energizes the hydrogen atom proton, the spiritual energy, or consciousness, of Red animates your body. Will consciousness awakens you from deep astral sleep. It opens your eyes; it starts your day here on Earth. (See figure 3.1)

“At the end of the day, the red color has switched over to the electron, and the violet energy is now focused on the proton. Now, your thoughts change because the violet ray is that of order,” and deep intuition. You reflect on what has transpired during the day as you enter the night. Sleep, of course, is dramatically healing largely as a result of these spiritual forces.

“There are seven basic colors in the rainbow, and each color corresponds to one of the seven spiritual dimensions. Thus, during a 24-hour period, each color touches” your hydrogen protons and affects your consciousness to their corresponding levels. “This is all part of the creationistic dance. “

“The color green, however, has its unique properties,” Dr. Bell continued. “Green is a central frequency for hydrogen in that it is not affected by time. If you could imagine looking from the end of a rainbow rather than the customary ‘side’ view that we normally see, you can begin to get the real picture. In your



mind, imagine the rainbow to be straight rather than curved, and you are looking at the end. Now rotate the end so the rainbow begins to spin on its axis. When this happens, the red is on one end, and the violet is on the other end. Green is in the middle. It doesn't move! It is now the center of the hub (as shown in figure 3.1).

"This is precisely how it behaves in the energy role within the hydrogen atom," Dr. Bell explained. This energy is unique as the color of nature. We also believe that this color and aspect of hydrogen operates to enable intelligence as a gateway between our head and our heart.(Bell, 1999)

"Remember," he summarizes, "as the sun appears to move in the sky (which is the Earth rotating on its axis), the hydrogen atom is changing polarity. That means that the vibrations, the frequencies, the music is changing polarity. When the sun goes down, the violet part of the energy field shifts to the nucleus, the

proton, and the red energy focuses on the electron. It makes a 180-degree phase change (See figure 3.2). Consciousness rotates 360 degrees through hydrogen. That's why you think differently in the morning than you do at night. That is also why if you transit from L.A. to Germany in twelve hours, it takes you a long time to adjust to the geographical change, because the hydrogen has to repolarize. This is of course, called 'jet lag'." (Bell, 1999)

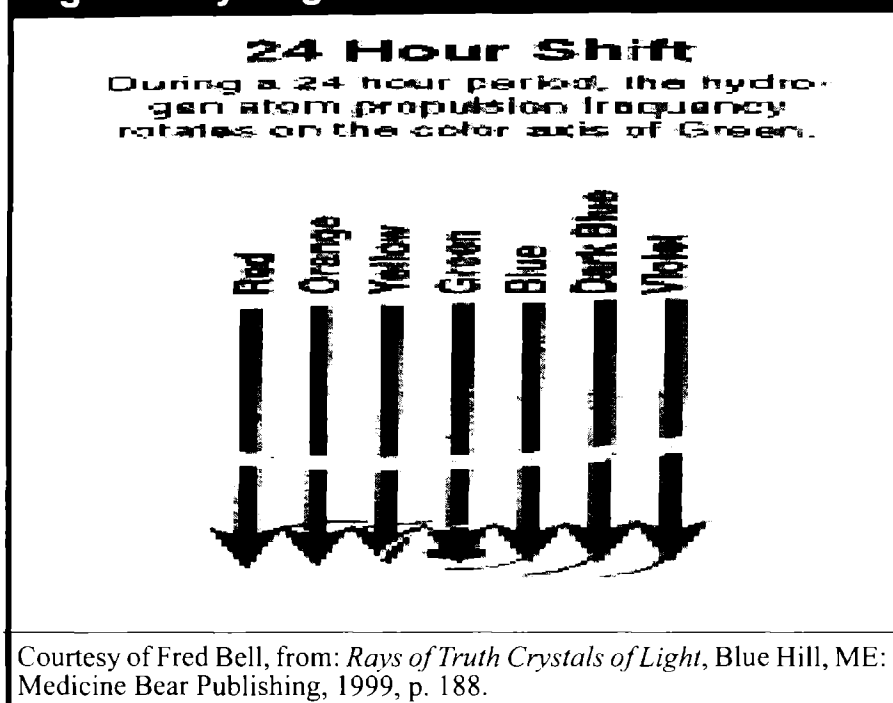
This discussion of hydrogen, which may seem overly technical for some readers, or trivial to others, is included here simply to give you some sense or deeper understanding of the power in the hidden world of matter and energy's electrodynamics. With this sensitivity you will be more likely to appreciate the subtle, but extremely powerful, role natural energies play on DNA's various expressions.

The Key Energetic Element Oxygen

As previously considered, the Hebrew name for God is "Yah or Yah-ho-vah," which literally means "to breathe is to exist." To exist is to breathe! That is why many ancient names like *Isaiah*, *Abraham*, and *Sarah* include Yah's name. So does the ancient Hawaiian greeting *aloha*, and *ahsalaam* in Arabic cultures. All of these tributes declare the Creator's presence, as does the word "prana[h]" in Eastern religions. All of these refer to the creative energy of life that is carried by oxygen. This should inspire you to practice deep abdominal breathing.

Consider this even more. Did you know that laughter facilitates healing? This is because the sound made during a belly laugh—"Ha hah," or hearty yawn—"Haahh," replenishes the lungs, blood, and spirit with this energizing element. You know that laughter is generally contagious. Most people long to be part of a joyous celebration as much as they wish to be close to Yah. Indeed, calling out His name this way, in hearty laughter, is in fact bioelectrically uplifting. This is energetically as well

Fig. 3.2. Hydrogen Atom Green Axis Rotation



as emotionally transmissible. Others are compelled to laugh or yawn when they see you do it, because the spiritual affect of praising Yah with your frequency of sound—"Ha, Ha, Hah," or your yawn—"Haaaah," travels magically (i.e., electromagnetically) through the firmament or ethers to uplift others who long for oxygen and Yah's Holy Spirit. Likewise, the sound that you make when you drop into a hot bath after a hard day gives praise to Yah—"Aaaaahhh!" Even a person's scream while under attack automatically calls Yah's name for Divine intercession—"Aahhhhhh!"

In summary, just as "Yah formed a person . . . and breathed into his nostrils the breath of life, recalls the Bible, so that" he might be "a living being," the Creator's grace is forever being poured into humanity, your body included, as oxygen literally inspires life.

We are proceeding through this largely metaphysical discussion of water, hydrogen, and now oxygen because this is the

source of all life that DNA largely regulates through its Sacred Spiral design and special molecular arrangement of hydrogen and oxygen forming its structured water matrix that is further detailed ahead. More than hydrogen being a catalyst for life on this planet, as per our previous discussion about the sun, oxygen is the energetic carrier of the Creator's and the sun's energy. By what mechanism is this accomplished? Let's visit with "Mr. Oxygen," Ed McCabe, for the answer.

According to McCabe's latest book, *Flood Your Body with Oxygen: Therapy for Our Polluted World*, oxygen is central to a global purification cycle also involving water, ozone, other forms of polyatomic oxygen, and peroxide. He explains it very simply this way:

Oxygen (atomic symbol "O") is the major part of the continuous cycle of life. . . . The chemical symbol for the two atoms making up the oxygen molecule is $O+O$ or O_2 . Once created in nature, the sun turns the oxygen into ozone, O_3 . The O_2 oxygen generated on the planet rises up and up into the heights of the atmosphere, pushed there by atmospheric winds until the sun's light (at 185 to 254 nanometer wavelengths, in the ultraviolet range) energetically strikes these O_2 oxygen molecules and splits them apart. Most of this starts happening in the upper atmosphere layer about 6 kilometers or 3.7 miles above the earth. Stratospheric ozone is found in a broad band, generally extending from about 15 to 35 kilometers (9 to 22 miles) above the earth.

Ozone is created when three O_2 molecules are split up, or disassociated, by the sun's light and then they immediately recombine into two O_3 molecules. At first, the oxygen O_2 molecules are broken apart into lots of two O_1 's and all of these hungry-to-combine-with-something O_2 atoms quickly attach to each other. They resemble and form long chains of oxygen molecules. $O+O+O=O_3$, $O+O+O+O=O_4$, then O_5 , O_6 , O_7 , O_8 , etc., all the way up to O_{21} and beyond.

These polyatomic (many atom) forms of oxygen are all called "ozone." For simplicity's sake we simply say "ozone" or use the symbol O_3 , to roughly include all these different types of ozone. However, there are significant differences between the various forms, especially when we talk about

their use in healing. O₃, O₄, and O₈ seem especially significant. (McCabe, 2003)

O₃ ozone is so energetic it constantly wants to become stable O₂ oxygen by giving up O₁. That's what makes it useful in healing; all those single oxygen forms are constantly being created in a cascade of O₁ releases. The O₁'s are negatively charged, and they are the heroes that perform healing work and do all of the free radical scavenging by combining rapidly with the positively charged garbage in our bodies.

. . . [A]ll you need to know is that way up high in the region of the ozone layer the sun turns fresh oxygen into ozone, and this creates the ozone layer. If we were to compress the entire atmospheric ozone region it would only be paper thin.

Ozone creation is a transitory phenomenon; it happens momentarily, and continually repeats so long as the sun is shining. Few people realize that the ozone layer is a paper-thin boundary layer. It's produced constantly and is part of the Grand Circle of Life. The trees and plankton make the oxygen [from the sunlight, as you will read in greater detail below]. The oxygen comes up, the sun turns the top of the oxygen layer into ozone, and then the ozone falls to earth because it's heavier than air.

. . . More oxygen comes up to replace the falling-down ozone, and the new replacement oxygen also gets turned into ozone. This is a living biosphere. The ozone layer is not some stationary gas band. It's not a fixed quantity layer, and there is no fixed oxygen pool below it.

This is normally how the oxygen we breathe is constantly produced, cleaned, and recycled. Ozone is so full of the sun's clean energy that we use it in healing to remove impurities. In the same way, and with the same purifying action, we use the sun and ozone when airing out an old mattress or sleeping bag . . . Sunlight bouncing off water and snow increases nature's ozone production because the bounced sun rays get another chance to strike the atmospheric oxygen. Breathing elevated natural ozone levels is one of the reasons we unconsciously feel energized during swimming and snow sports. (McCabe, 2003)

Ed McCabe's narrative begins to explain how and why oxygen delivers the "Life Force" from the sun, and why it joins

hydrogen to become the “Healing Duo” the two most critical elements in life.

A hemoglobin part of a healthy person’s red blood cells (RBCs) holds between 97% to 100% oxygen depending on the purity of the air or oxygen consumed. Oxygen partial pressure, or “ pO_2 ”, the dissolved oxygen level in your bloodstream, is measured in millimeters mercury, or “mmHg.” Your RBCs can only deliver a limited amount of oxygen to your cells and tissues up to approximately 80mmHg. Infections, injuries, and illnesses can cause your oxygen levels to drop down to nearly zero in some cases.

Research shows that 90% of your biological energy comes from oxygen. Likewise, optimal healing of tissues depends on oxygen levels. Many naturopathic doctors say if you can get your pO_2 to rise above 100 mmHg, you will favor prompt healing. In a normal room, oxygen tension is only about 19% to 21%. For this reason, many health clinicians administer oxygen in various forms for their needy patients.

In one hour, the average adult inhales more than two pounds of oxygen. Daily, he or she consumes nearly two pounds of water, four pounds of food, and almost six pounds of oxygen. It is interesting to note that you process nearly the same weight of oxygen as you do food and water combined.

Instantly red blood cells electromagnetically attract oxygen and begin circulating it. Excess oxygen dissolves into your blood plasma and tissue fluids.

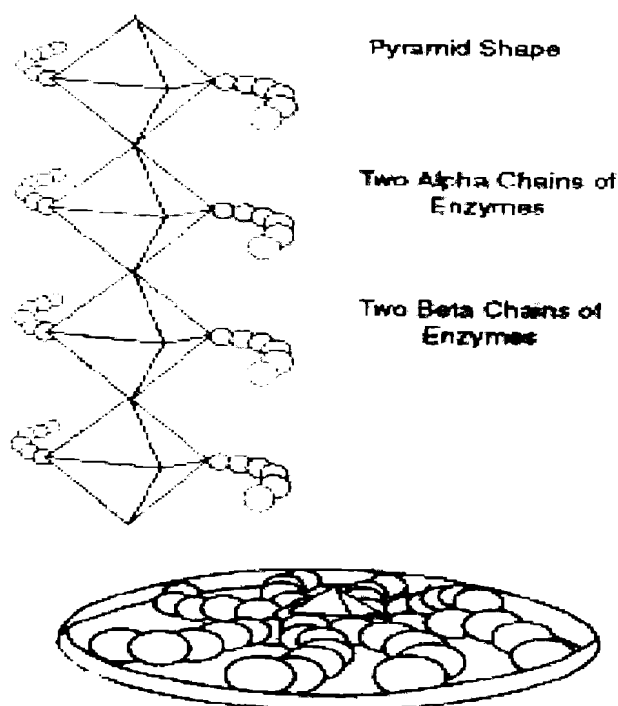
You may also be interested to know that the hemoglobin component of RBCs, like DNA, is structurally spiralled for maximum energy conductivity and electromagnetism. That is, it is designed by the sound of nature’s voice, or “universal orchestra” by the Master Conductor and Supreme Composer, to attract and transmit optimal amounts of oxygen and energy for its small size.

(See figure 3.3, below, and 3.6 on page 51.)

Electromagnetics, DNA and Divine Healing

Electromagnetism is defined in *Webster's Dictionary* as “a fundamental physical force that is responsible for interactions between charged particles which occur because of their charge and for the emission and absorption of photons [light energy] . . .” Thus, strictly adhering to its definition, since every physical object is composed of atoms and subatomic particles that interact because of electromagnetic phenomena, one might say that electromagnetism is fundamentally responsible for all life,

Fig. 3.3. Sacred Hemoglobin Spiral Structure for Carrying the “Life Force” in Oxygen



Red blood cells are composed largely of hemoglobin, which is made up of hemes. One heme has four octahedrons (pyramid shapes) of iron, and is surrounded by hundreds of enzymes. The iron molecules are stacked in line, forming two alpha and two beta chains as shown above. These hemes are stacked in the blood like wafers. Contributed by Dr. Fred Bell from: Bell F. *Rays of Truth Crystals of Light*. Medicine Bear Publishing, 1999, p. 81.

and everything in the physical universe. It is also characteristic of ether—the spiritual force or energy—from which all matter precipitates. It is not the Supreme Composer, but it is certainly a master conductor by its own right

Take oxygen again—a vitally important element affecting DNA expression and healing phenomena. As we will explain in greater detail later, every aspect of life depends on this element. It is engaged in reenergizing every physiological function in your body through the Krebs (tricarboxylic acid) cycle. Oxygen plays a critical role in freeing up ATPs—your body’s main electromagnetic energy rich molecule. This is the end toward which carbohydrate, fat, and protein metabolism points, that is, the production of more electromagnetic energy expended to produce more energy or continuous contribution/service cycle.

Furthermore, oxygen’s root words according to *Webster’s Dictionary*, include one relating to genetics and DNA’s primary function: *oxy*—relating to “sharp, acid,” and *gen*—pertaining to “information . . . producer; . . . born and become.” This relates intimately to water and its miraculous healing capabilities. Recent research shows that water molecules have an electromagnetic energy storing capacity. This frequency memory is thought to be associated with the sacred geometric structure of water composed of one oxygen atom combined with two atoms of hydrogen.

The sacred geometry of water is immediately apparent. H₂O produces molecular shapes consistent with the structure of a tetrahedron—the most stable structure in the physical universe. These four sided equilateral triangular pyramids of water hold Divine symmetry and optimal electrochemical viability. Using the inherent electromagnetics of sacred geometry, they are able to receive, store, and transmit sound and light energy signals and healing frequencies.

Another example of the electro-capacity of oxygen and this powerful pyramidal shape is the recently discovered Tetrasil® molecule. Used in new healing formulas, this silver molecule sur-

rounded by four oxygen molecules forms the shape of a pyramid. Most silver colloids and medicaments are good antimicrobials. But put the oxygen rich Tetrasil® pyramid next to cell membranes of pathogens loaded with nitrogen and it literally explodes, annihilating the bacteria or virions.

This electromagnetic carrying capacity of oxygen and the pyramid-shaped water molecules largely explains, as you will learn in more detail later, how DNA and natural medicinals such as homeopathics work. They literally absorb and transmit frequencies of energy primarily due to their sacred cymatic geometric form. Cymatics is the study of sounds' effects on form and matter. Homeopathic medicines only contain water, a little alcohol for sterility and stability, and nothing else except the electromagnetic frequencies. The "pyramid power" of water retains this frequency from the disease "nosode," and passes it on through serial dilutions to the final product. Similarly, Tetrasil® sends its elemental silver frequency (possibly along with orgone energy) through its molecular pyramid as a healing salve and broad spectrum antimicrobial agent.

Likewise, herbs and essential oils transmit their own specific electromagnetic frequencies and fields, many used for healing as prescribed throughout the Bible.

In addition to storing and transmitting electromagnetic frequencies, water as well as well hydrated cells, tissues, *and* DNA can be structurally altered by electromagnetic energy frequencies of sound, light, and even prayer, according to leading water researchers. Thus, the association between the creationistic elements of sound, light, prayer, and healing, on all levels, begins with oxygen combined with hydrogen to make the sacred geometric form of tetrahedral water.

Identical electromagnetic and electrochemical mechanisms best explain how spiritual "hands-on" healers promote recovery, and like the amazing stories in the New Testament, how Yeshua was able to produce miraculous healings. You can simply transmit Yah's healing energy into people when you rely, with faith

and trust, on the Creator, His Holy Spirit, oxygen, and water molecules coursing throughout your body.

Recall your Creator's geometric form given to Moses: "I am that I am. . . . I am the tetragrammaton." You are mostly composed of that form as well.

Referring to the metaphor discussed in the first chapter, it is well known that radio and television signals are carried by specific electromagnetic frequencies. This involves transmitting, channeling, and receiving electromagnetic energy. In the case of healing, it is Yah's Holy Spirit that is being transmitted. The Holy Spirit *is* the Source, and possibly the Universal Channel, for Divine healing. As you will learn in the next sections, water molecules surrounding cellular DNA absorb, recall, and transmit this healing Spirit to their surroundings.

In theory, and in the hugely successful practices of homeopathy and electromedicine, every disease state and pathogen maintains characteristic frequencies. These can be affected through harmonic and disharmonic frequency interventions. Generally speaking, harmonic frequencies maintain health, promote growth and healing, while discordant frequencies produce stress, oxygen deprivation, acidification, electrochemical imbalances, illness and death. You will learn more about this in Chapters 5 through 7.

Clustered Water: DNA's Magical Matrix

All water, once again, is different. Remarkably, harmonic frequencies within the electromagnetic energy spectrum naturally transforms water molecules structurally. In many cases they form hexagonal or pentagonal rings called structured water clusters or simply *clustered water*. Cryogenically flash frozen, then cut into thin sections with a microtome for microscopic examination, these mostly six-sided water rings concentrated in and around

DNA resemble beautiful crystalline snow flakes as seen in figure 3.4.

Drs. Lee Lorenzen and Patrick Flanagan, two of the world's leaders in clustered water technology, explain that these five and six-sided clustered water molecules can be found throughout the body, but mostly concentrated in the electromagnetic field of DNA. This is called the hydroenergetic *matrix* of healthy DNA. These clustered water molecules activate the genetic sequence's ability to receive and transmit electromagnetic signals—what Nobel Prize in Medicine winners have termed “phononphoton emissions for intercellular communications.”

In fact, during the 1990s, three Nobel laureates in medicine advanced research that revealed the primary function of DNA lies not in protein synthesis, as was widely believed for the past century, but in electromagnetic energy reception and transmission. Less than three percent of DNA's function involves protein manufacture; more than ninety percent functions in the realm of bioacoustic and bioelectric signaling.

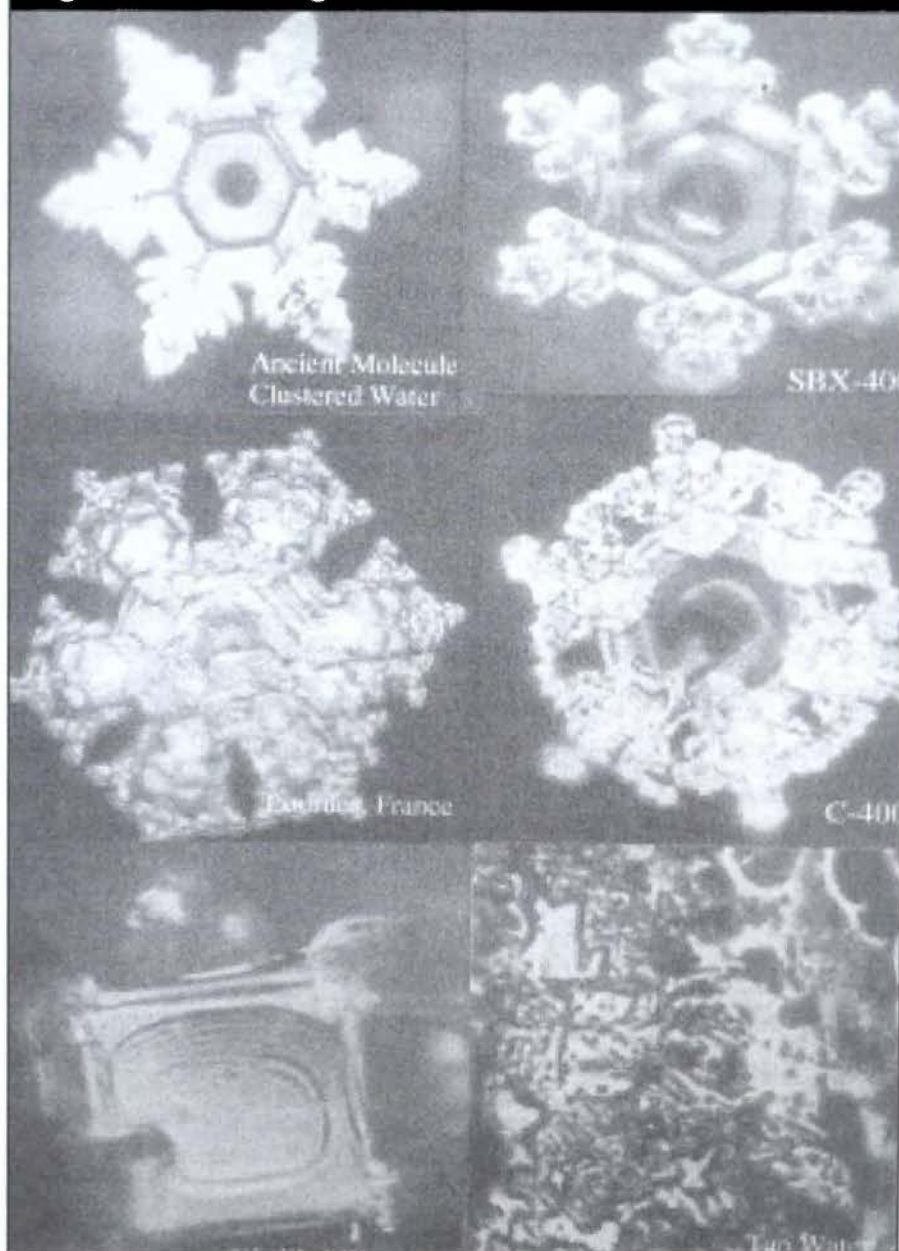
Structured water has clusters and/or long strings of ordered molecules. This increases its electrical conductance.

Dr. James Clegg, at the University of Miami, studied the structuring of water in cells. He showed that all proteins and chromosomes in cells have a layer of bound water around or within them about 10 molecules thick.

As already mentioned, enzymes are proteins that trigger, or govern, energy metabolism and every chemical reaction in your body. Therefore, given Clegg's findings, when an enzyme reacts with a substrate, *the only substance that actually touches the substrate molecule is energized water!* Since other substances in cells are also coated with packed water, the chemical reactions taking place in your body are mostly interactions of shaped layers of water molecules.

Any water you drink must be conditioned to match your blood's surface tension of 42 dynes/cm. Structuring water low-

Fig. 3.4. 20K Magnification of Flash Frozen Water



20,000 magnification photographs of different cryogenically prepared (i.e., flash frozen) water clusters. Upper left is ancient polar sample taken from two miles beneath the polar ice cap indicative of most pristine water. Middle left photo shows clustered water sample taken from the healing well at Lourdes France. Upper and middle right are similar clustered water molecules developed by Dr. Lee Lorenzen. Lower left and right are similarly prepared samples of distilled and tap water, respectively. Courtesy of L. Lorenzen and M. Emoto.

ers surface tension (to at least 68 dynes/cm versus distilled water at 72 dynes/cm), and has an effect on the water similar to adding soap. Substances dissolve more easily in water with lower surface tension. Boiling water, for example, has a surface tension of about 68 dynes/cm and easily dissolves many things. Structured water at room temperature with 68 dynes/cm surface tension has the same “dissolving power” as boiling water! So, drinking structured water allows the body to “wash” itself more effectively.

Water in areas where people live the longest shares similar characteristics, like lowered surface tension indicative of being structured. For example, the Hunza mountain water has a surface tension of some 68 dynes/cm.(Hyson, 2004)

According to Igor Smirnov (who works with structured water, in part as a way to improve the health of people exposed to Chernobyl’s nuclear radiation) the nucleus of the cell has two layers of membrane which makes it difficult to introduce agents to modify gene expression. Yet, structured water easily reaches the nucleus and can carry information and change the gene state.(Smirnov, 2002)

Dr. Michael Hyson, an expert in dolphin-directed therapy whose work is detailed in the final chapter of this book, attests that structured water packs along the DNA backbone. These water molecules form the *tensile* part of the DNA structure. The molecules themselves are *compressive* members. Thus, the structure of DNA is like Buckminster Fuller’s *tensegrity mast*. Here, tensile and compressive forces are balanced. Such structures are flexible, and any change in the tension on any part of the mast will twist or bend the whole mast. Similarly, the packing of water in DNA is important in maintaining proper genetic structure.(Hyson, 2004)

Acoustic and electromagnetic fields change the structure of water and this in turn changes the shape of DNA and alters related genetic expression. EM and acoustic fields in the range of 0-30

Hz can structure water. One of the best water structuring signals mimics the geomagnetic field of the earth.(Smirnov, 2002)

Dr. Steven Birch found the average frequency of sound emitted by dolphins when swimming therapeutically with ill people was 26 Hz, an effective frequency for structuring water.(Hyson, 2004)

Effects of Structured Water

Structured water can encode patterns. We know this from the work of Cyril Smith.(Smith and Best, 1989) Briefly, Smith found frequencies, idiosyncratic to each patient, which would improve their allergic symptoms. Simply holding a vial of water that has been exposed to “calming” frequencies would lessen their allergic reactions. The water in the vials was exposed to very low power electrical fields in the Extreme Low Frequency (ELF) range (below ~1000 Hz). He showed that water so exposed had measurably different light absorption spectra, especially in the UV range. This shows that a frequency pattern of wave energy was impressed upon the water and “remembered” or retained therein.

In the case of DNA, when structured body water receives a certain frequency, that energy pattern can enter the cell nucleus, affecting the packed water around the DNA, and change the genetic code leading to different patterns of gene expression.

During aging and intoxication, DNA’s supportive matrix of water clusters is compromised. This changes the electrical potential, physical integrity, and energetic signaling capacity of DNA. This lack of hydration, researchers worldwide now believe, is the primary process underlying aging. (Saykally et al., 1996; Horowitz, 2000)

According to biochemist and author Steve Chemiske, these mostly hexagonal shaped water rings supporting the DNA double helix, “vibrate at specific resonant frequencies and these frequencies can help restore homeostasis to cell structures in the body

through signal transduction . . . the process by which one form of energy is converted to another.

“When clustered water is consumed, high frequency information is transmitted to proteins . . . [and] this wave of information is carried throughout the body like a ‘wake-up call’ to help restore normal function.”

Dr. Franco Bistolfi, a bioelectronics expert, theorized that intercellular communications, instantaneously affecting cells through out the body, occurs “by means of piezoelectric interactions and photon/phonon transduction of electromagnetic signals of both endogenous and exogenous origin.”(See figure 3.5.)

In other words, tiny barely perceptible electromagnetic signals, both man-made and natural, harmonic or chaotic, profoundly influence the hydrogen, oxygen, and water molecules supporting DNA. This affects health status, or alternatively, the pathogenic processes involved in virtually every disease.

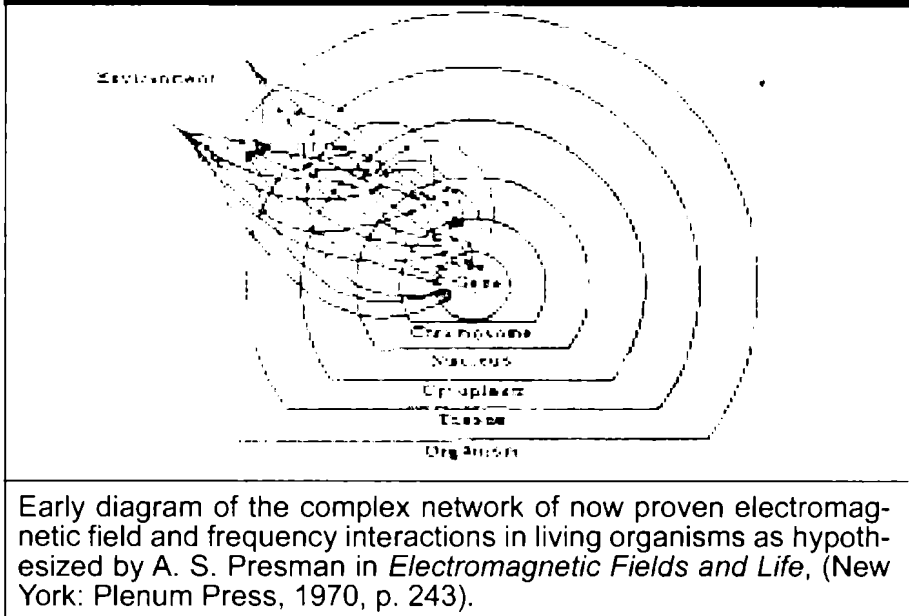
In this scientific context it is extraordinary that the *Book of Revelation* predicted that the Messianic Age would come, along with the great “healing of the nations,” accompanied by “crystal clear water” flowing, once again, through “rivers and streams” the Bible says are “the people.”

It is remarkable that the structure upholding the “tree of life”—DNA—as seen in figure 3.7, is not a snake (symbolic of the pharmaceutical and/or medical deity cult), but in reality, pure structured water.

In its healthy state, the clustered matrix supporting the double helix acts as an electromagnetic energy receiver and transmitter. Scientists now believe this is the primary function of DNA.(Gariaev, 1995; Miller et. al., 2002)

Moreover, the structure of more than 4,000 enzymes that regulate virtually every body function largely depends on these same hexagonal and pentagonal-shaped water clusters communicating to the enzymes through an intracellular “nano-structured”

Fig. 3.5. Likely EmF-Mediated Interconnections



filament-like protein lattice that, at the time of this writing, remains generally unknown among medical professionals.

Electromagnetic Frequencies and Genetic Functions

In one of the earliest textbooks on *Electromagnetic Fields and Life* (Plenum Press, 1970), by Russia's top biophysicist, Dr. A.S. Pressman, the works of numerous scientists investigating electromagnetic frequencies and genetic functions were discussed. Pressman provided the diagram seen in figure 3.5 depicting the "complex network of possible interactions in organisms" between DNA and up-regulation of the entire organism by way of electromagnetic transmissions. As seen in the figure, genetic electromagnetic signals communicate regulatory messages from the gene and chromosome through the nucleus, cell cytoplasm, body tissues, and ultimately to the entire organism and its environment. As shown in figure 3.5, this signaling can also occur in reverse, that is, from the environment to the genetic core of every cell in your body.

As Pressman described it:

If the described effects are considered from the standpoint of the concept of diverse EmF [electromagnetic field] interactions within the organisms and its interactions with environmental EmFs, then we can sketch a picture which is very convincing in its simplicity and consistency. In fact, we can picture the organism provided with diverse interconnections of such kind (in addition, of course, to the known diverse neurohumoral [nerve and hormonal] connections), differentiated as regards their specific “working” frequencies, intensity ranges, and method of coding. Such interconnections may underlie not only the interactions between cells, but also specific interactions between macromolecules: enzyme and substrate, antigen and antibody, DNA and ribonucleic acid (RNA). Similar interconnections may be responsible for the control of protein synthesis. In a recently proposed hypothesis regarding such control, . . . DNA molecules are regarded as generators of radio-frequency signals, RNA molecules as amplifiers, and enzymes and amino acids as effectors of signals coded in various regions of the spectrum; the cell wall is believed to act as a noise filter.

Thus, reflecting on Nobel Prize winning research conducted during in the 1990s, twenty years after Pressman wrote the above hypothesis, his theory is now amply supported by rapidly evolving science in the fields of genetics, biochemistry, electrochemistry, nanotechnology and biophysics.

More Modern Determinations

The concept of light frequency signaling through the DNA to intra and intercellular environments was pioneered in the 1920s by Russian medical scientist Professor Alexander G. Gurvich. He named these creative energies, or spirits, “mitogenetic rays.” In the 1930s this field became widely researched in Europe and the USA. By 1974, with the work of German biophysicist Fritz-Albert Popp, the mitogenetic ray hypothesis had been proven.

To help explain coherent energy signaling for intra and intercellular communications emanating from DNA in laser-like photons (energy packages) Popp developed his biophoton theory. He

explained the possible bioelectric roles played by genes, and the ways in which DNA-directed energy may control biochemical processes, cell growth, differentiation of cells, and more. Popp's biophoton theory led to many startling insights into life, its relationship to spiritual electrodynamics, and related processes that largely explain the efficacy of holistic healthcare practices generally shunned by mainstream medicine.

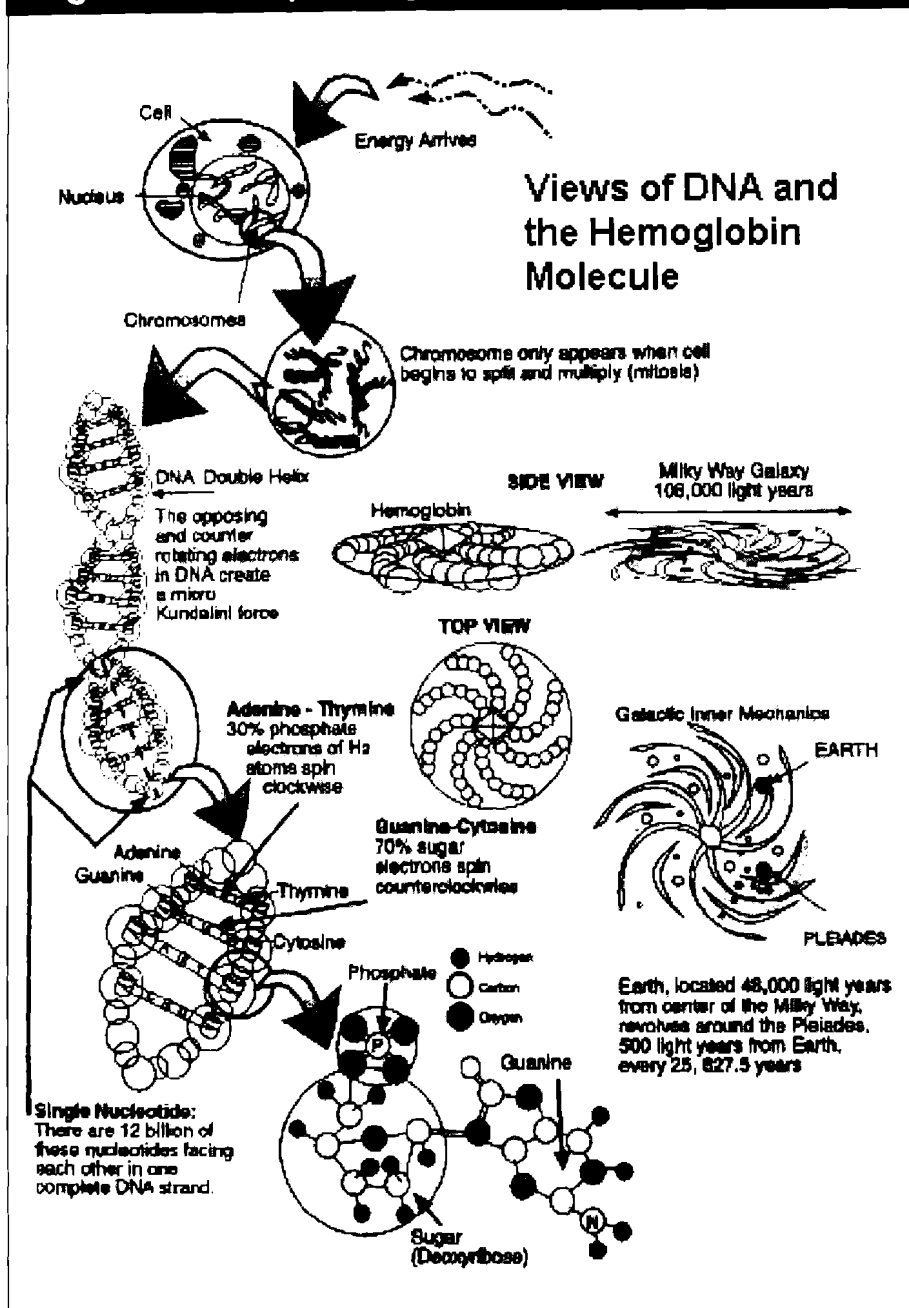
Popp's discoveries were later confirmed by eminent scientists such as Herbert Froehlich and Nobel laureate Ilya Prigogine.

Since 1992, the International Institute of Biophysics, a network of research laboratories in more than 10 countries, has coordinated research in this field. Based on this work, in 1995, Marco Bischof, Managing Director of the institute centralized in Neuss, Germany, published *Biophotons: The Light in Our Cells*, to help publicize the esteemed group's findings. According to his publisher, Zweitausendeins in Frankfurt, Bischof's aim was to reach a wider audience for this knowledge base, especially among scientists, medical doctors, and general readers interested in new developments in medicine, consciousness research, and a popular treatment of the historical antecedents of these modern concepts of "life energies" and bioelectricity. The award winning text also contrasts the age-old scientific controversy between vitalistic and mechanistic trends in biology and medicine.

According to Bischof's compilation, biophotons are ultra-weak light energy (i.e., photon) emissions from DNA and other biological structures, engaged in the creation and regulation of life. "All living cells of plants, animals, and human beings emit biophotons which cannot be seen by the naked eye, but can be measured by special equipment," he recorded.

In terms of diagnostic and therapeutic applications, this light can be used to assess or impact a person's state of health. "Cancer cells and healthy cells of the same type, for instance," according to Bischof, can be discerned "by typical differences in biophoton emissions." Following more than a decade of basic research on this discovery, biophysicists from various European and Asian nations explored innovative applications for these revelations

Fig. 3.6. The Spiraling of DNA and Hemoglobin



Dr. Fred Bell argued that DNA and hemoglobin are both structurally and functionally influenced, as spirals, by cosmic energy as well as by electromagnetic charges surrounding the Earth's atmosphere. From: Bell, F. *Rays of Truth Crystals of Light*, Blue Hill, ME: Medicine Bear Publishing, 1999, p. 139.

ranging from unprecedented non-invasive cancer diagnosis and treatments, to electromagnetic determinations of food and water quality.

Let There Be Light and Life!

“Let there be light!” According to rapidly expanding scientific consensus, light produces life, and is stored in the cells of organisms, more precisely, in the DNA the Sacred Spiral within its structured water and each nucleus. From here, a dynamic web of transmitted light connects cell organelle, neighboring cells, tissues, whole organs, and entire organisms.

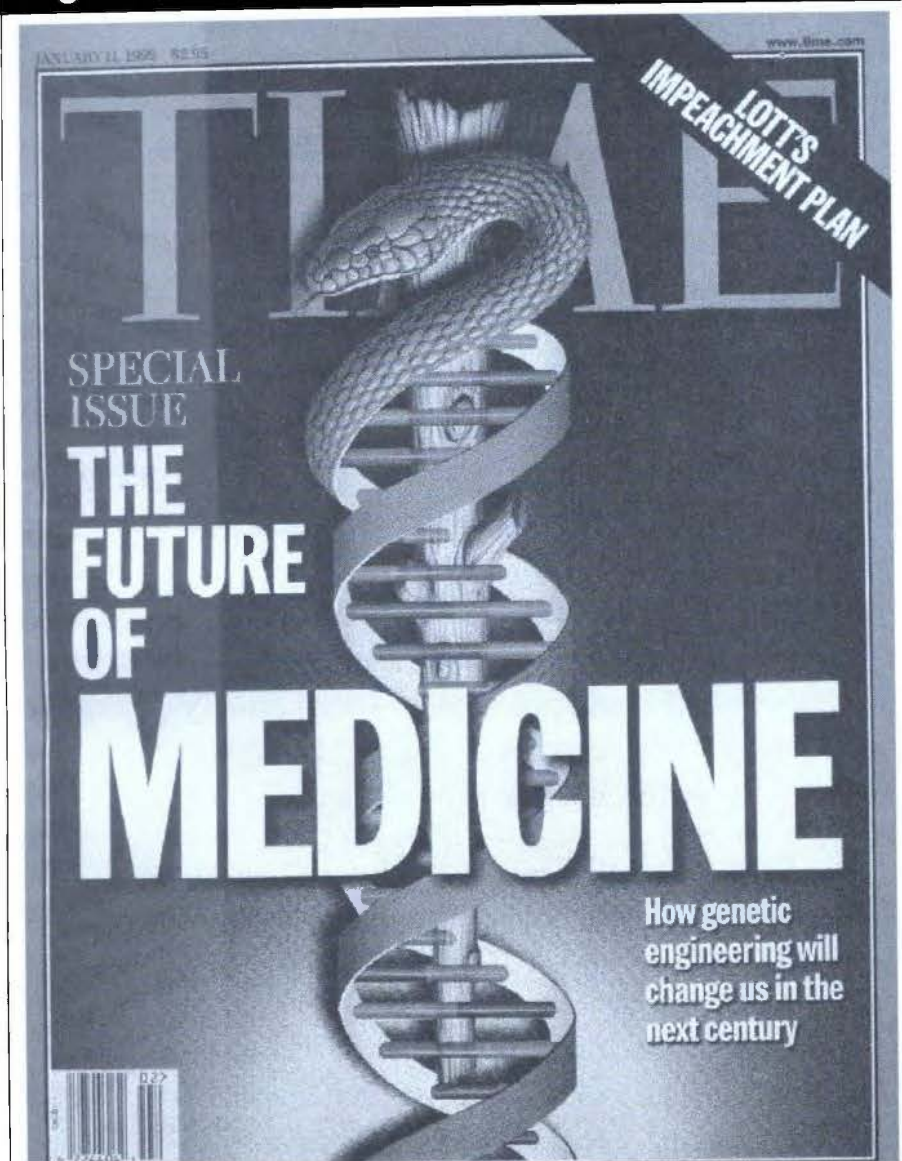
Thus, DNA serves as the central processing station for every organism’s electrochemical communications network, and as the primary regulating instrument for all of life. Processes including morphogenesis, growth and development, cellular and tissue differentiation, and regeneration and healing, are all explained by this profound scientifically-proven fact the Sacred Spiral of DNA facilitates the structuring and regulating activity of all coherent biophoton fields operating within every living thing.

In essence, you are crystallized or precipitated light! Along with this humbling recognition comes the good news. You are, at the same time, directly connected to the light and love of the Divine Source of all creation.

Other contemporary thinkers perceive the holographic biophoton field operating at the level of brain neurology, and likely associated with ancient memory and other phenomena of consciousness. This has been mainly postulated by neurophysiologist Karl Pribram and others. This topic is covered in great detail in Chapter 12.

The confirmation of these biophoton emissions, and energetic bioforce fields, also lends scientific support to unconventional methods of healing such as various somatic therapies that engage practitioners as conduits of spiritual energy. Tai Chi trainers, acupuncturists, spiritually disciplined chiropractors, natu-

Fig. 3.7. Cover of *TIME*'s Future of Medicine Issue



TIME's January 11, 1999, "Special Issue" displays the use of religious symbols including the snake, the tree of life, and double helix DNA—an example of science mimicking a religious cult. Omitted from this featured story was the recognition that the primary function of DNA is bioelectric or spiritual. Genes are surrounded by clustered water molecules that facilitate "photon-phonon transmissions" of electromagnetic energies to up-regulate the functions of cells and tissues. Thus, vibrations are transmitted through DNA for "good" or "evil," health or disease.

ropaths, and homeopaths take advantage of the same energetic capabilities.

In many instances, positive healing intent, along with optimistic thought forms—themselves light or biophotons—apparently impart a Divine healing frequency or loving spirit within the recipients of this care.

With homeopathic formulas, we explained that water molecules hold and release these frequencies of spirit for regeneration.

With acupuncture, the “chi” energy is helped to flow through energy channels, or meridians, which according to traditional Chinese medicine regulates all body functions. Contemporary investigators suggest these meridians may be related to node lines of the organism’s biophoton field.

Likewise, in Indian yoga, the prana affecting human physiology may be a similar regulating energy that has a basis in weak coherent electromagnetic biofields.

Creation Through Sound Vibration

Of all the articles on the powerful influence vibrational frequencies have on physical matter, a German investigator, Peter Pettersson, provided one of the best. In *Cymatics: The Science of the Future?*, he effectively summarized the creative connection between sound, vibrations, and physical reality as he reviewed the work of the field’s top researchers. Pettersson laid the foundation for scientifically comprehending creationism.

Pettersson began with Ernst Chladni, the first observer of the “Chladni figures”—the shapes and forms produced as a result of sound vibrations striking the surface of matter. Chladni was, not surprisingly, a musician and physicist. Born in 1756, he laid the foundations for the discipline within physics called acoustics—the science of sound.

In 1787, Chladni published *Entdeckungen über die Theorie des Klanges* or *Discoveries Concerning the Theory of Music*.

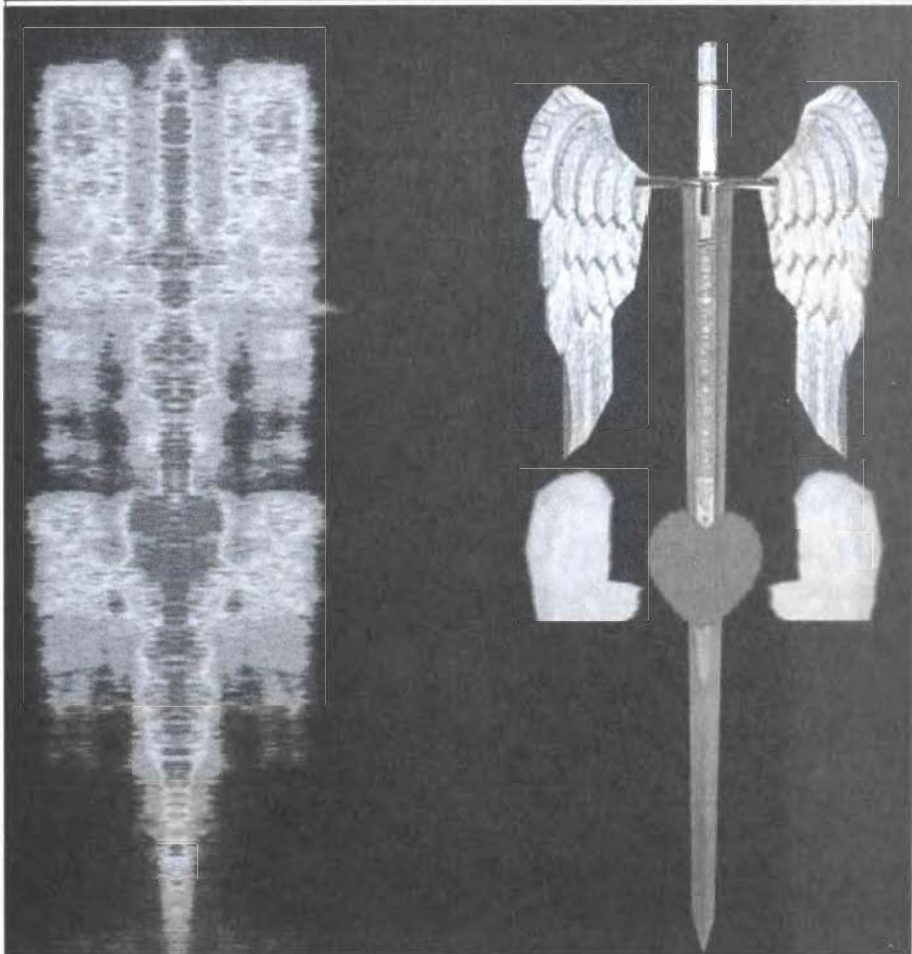
“In this and other pioneering works he explained ways to make sound waves generate visible structures. With the help of a violin bow which he drew perpendicularly across the edge of flat plates covered with sand,” Pettersson wrote, Chladni “produced those patterns and shapes which today go by the term Chladni figures.” This was significant because it demonstrated that sound actually affected physical matter. It held the power to create geometric forms in substances.

Later, in 1815, Nathaniel Bowditch—an American mathematician who followed up on Chladni’s work—studied “the patterns created by the intersection of two sine curves whose axes are perpendicular to each other, sometimes called ‘Bowditch curves,’ but more often ‘Lissajous figures,’ after the French mathematician Jules-Antoine Lissajous who, independently of Bowditch, investigated them in 1857-58. Both concluded that the condition for these designs to arise was that the frequencies, or oscillations per second, of both curves stood in simple whole-number ratios to each other, such as 1:1, 1:2, 1:3, and so on. In fact, one can produce Lissajous figures even if the frequencies are not in perfect, but close, whole-number ratios to each other. If the difference is insignificant, *the phenomenon that arises is that the designs keep changing their appearance.*” This, knowledge, applied to electromedicine, as you will soon learn, provides tremendous potential for healing virtually every illness.

Such figures, transformed by fluctuating frequencies, shift and change. What created the variations in the shapes of these designs was “the phase differential, or the angle between the two curves. In other words, the way in which their rhythms or periods,” their harmonics, coincided or not determined the shaping and movement of physical structures. Likewise, pertaining to creationism or healing once again, harmonious or discordant frequencies have been shown to produce striking differences in human tissues.

In 1967, Hans Jenny, a Swiss physician and researcher, pub-

Fig. 3.8. Frequency Fingerprint of Sacred Solfeggio Notes with Related Graphic-



Graphics show the "frequency fingerprints" of the third and fourth tones of the ancient Solfeggio scale sung together by Benedictine monks with images of a heart, wings and sword commonly found in the symbols of secret societies and religious art. An extensive study of the frequencies of this original musical scale in relation to the sacred geometric forms produced by these tones was conducted by doctors Dan Burisch and Marcia McDowell. These authors concluded, "It is entirely possible that a new key to the understanding of the formation of matter, by intention, through sound, has been identified by [their] discovery" of identifiable images within the sounds of the ancient Solfeggio scale. And that "[t]he future of such analyses offers the promise of a better understanding of the relationships between sounds and the physical forms they take. . . , another avenue in the understanding of ancient myths and arts, and even writing systems or possibly healing and prayer modalities." Source: Burisch D and McDowell M. *Emanation of the Solfeggio*. Tempe, AZ: Dandelion Books, 2007; (480-897-4452).

lished in his native language *The Structure and Dynamics of Waves and Vibrations*. Jenny, like Chladni two-hundred years earlier, showed what happened when one took various materials like water, sand, iron filings, spores, and viscous substances, and placed them on membranes and vibrating metal plates. Shapes and patterns in motion appeared that varied from “perfectly ordered and stationary” to those that were chaotic.

Pettersson acknowledged Jenny for originating the field of “Cymatics” that allowed people to observe the physical results of voice, tones, and song. Jenny applied the name “Cymatics,” from the Greek term “kyma,” meaning “wave,” to this area of research. Thus, Cymatics could be defined as: “The study of how vibrations generate and influence patterns, shapes, and moving processes.”

In addition, using his tonoscope, Jenny “noticed that *when the vowels of the ancient languages of Hebrew and Sanskrit were pronounced, the sand took the shape of the written symbols for these vowels.*” Modern languages, including English, failed to generate these patterns.

Several American researchers have confirmed Jenny’s findings, among them are doctors Dan Burisch and Marcia McDowell who conducted a structural analysis of the original musical scale. They concluded that the original musical scale, like original languages, relates to metaphysical formation of physical reality. Figure 3.8 shows a sample of their research. *This knowledge lays the foundation for understanding creationism in the strict sense from Yah’s spoken word as described in the Book of Genesis.*

Before we move on, take special note of Jenny’s work which provided examples of cymatic elements found throughout nature—“vibrations, oscillations, pulses, wave motions, pendulum motions, rhythmic courses of events, serial sequences, and their effects and actions.” These, he concluded, affected everything including biological evolution. *The evidence convincingly dem-*

Fig. 3.9. Derivation of English Letter Number Values

Letter & Number	Pythagorean Skein Equivalent	Key Word Number Derivations
A 1	1	T 20-2 + 0 = 2
B 2	2	R 18-1 + 8 = 9
C 3	3	U 21-2 + 1 = 3
D 4	4	S 19-1 + 9 = 1
E 5	5	T 20-2 + 0 = 2
F 6	6	98= <u>8</u> 17= <u>8</u>
G 7	7	
H 8	8	
I 9	9	F 6-6 + 0 = 6
J 10	1 + 0 = 1	A 1-1 + 0 = 1
K 11	1 + 1 = 2	I 9-9 + 0 = 9
L 12	1 + 2 = 3	T 20-2 + 0 = 2
M 13	1 + 3 = 4	H 8-8 + 0 = 8
N 14	1 + 4 = 5	44= <u>8</u> 26= <u>8</u>
O 15	1 + 5 = 6	
P 16	1 + 6 = 7	G 7-7 + 0 = 7
Q 17	1 + 7 = 8	O 15-1 + 5 = 6
R 18	1 + 8 = 9	D 4-4 + 0 = 4
S 19	1 + 9 = 10	26= <u>8</u> 17= <u>8</u>
T 20	2 + 0 = 2	
U 21	2 + 1 = 3	
V 22	2 + 2 = 4	
W 23	2 + 3 = 5	
X 24	2 + 4 = 6	
Y 25	2 + 5 = 7	
Z <u>26</u>	2 + 6 = <u>8</u>	

The number 8
represents infinity.
9 represents
completion

Table shows the English alphabet and its equivalent numbers. Two or more digit numbers are reduced to single digit numbers to employ the Pythagorean skein and determine the mathematics of the English language. Notice that numbers one through nine repeat; and the number 8, the universal sign for "infinity," is also the total for "Trust," "Faith" and "God." The number nine (9) represents completion. From: Horowitz, L. and Puleo, J. *Healing Codes for the Biological Apocalypse*, Tetrahedron Publishing Group, 1999.

onstrated that all natural phenomena were ultimately dependent on, and possibly entirely determined by, the mathematical frequencies of vibration.

According to Pettersson, Jenny “speculated that every cell had its own frequency, and that a number of cells with the same frequency created a new frequency which was in harmony with the original, which in its turn possibly formed an organ that also created a new frequency in harmony with the two preceding ones.” Regarding healing, Jenny argued that recovery from disease states could be aided or hindered by tones. Just as Pressman theorized, and modern science supports, Jenny believed that different frequencies influence DNA, specific genes, cells, and various structures in the body, and these in turn affect the entire organism.

Cathie E. Guzetta, a poet, summarized this science when she wrote, “The forms of snowflakes and faces of flowers may take on their shape because they are responding to some sound in nature. Likewise, it is possible that crystals, plants, and human beings may be, in some way, music that has taken on visible form.”

Trust, Faith, God, and Alphanumerics

In *Healing Codes for the Biological Apocalypse*, Drs. Horowitz and Puleo relayed how mathematics, the most precise language, is “God’s language” because it always speaks the exact truth. Through Divine guidance they learned that the Hebrew language, as well as English backwards, held a spiritual relationship through their alphanumeric translation.

In brief, Dr. Puleo took the English alphabet, from A to Z, as seen in figure 3.9, and numbered each letter: A=1, B=2, C=3, and so on.

After this, he was instructed to take the words “TRUST,” “FAITH,” and “GOD,” and perform a mathematical translation on them.

For TRUST, T=20 + R=18 + U=21, + S=19, and T=20 totals

98. Then he used the ancient Pythagorean mathematics method of reducing each number to a single digit. So $9+8=17$; then finally, $1+7=8$.

You get the same result—8—when you decipher the numerical equivalent of each letter first, then add their total according to the Pythagorean skein. The same thing occurs with the words FAITH and GOD.

For FAITH, $F=6$, $A=1$, $I=9$, $T=20$, and $H=8$ totals 44. And $4+4=8$.

For GOD, $G=7$, $O=15$, and $D=4$ totals 26. And again $2+6=8$.

Eight (8), Puleo realized is the sign of perpetuity, that is, “God’s number.” Interestingly enough, as mentioned previously, it is also the number for oxygen in the periodic elemental table. The “Life Force” element!

Any way you add them, according to Pythagorean mathematics, the words TRUST, FAITH and GOD always add up to eight.

Realizing there was something sacred about the number eight (8), and knowing, according to the Bible, Yah always multiplies rather than adds or subtracts numbers, Dr. Puleo deciphered all multiples of eights reduced to their Pythagorean single digit integer. He began with $1 \times 8 = 8$; $2 \times 8 = 16$ where $1 + 6 = 7$; $3 \times 8 = 24$ where $2 + 4 = 6$; and so on as seen in figure 3.9. He then realized the multiples of 8 produced a numerical countdown pattern—8, 7, 6, 5, 4, 3, 2, 1, 9, 8, 7, 6, 5, 4, 3, 2, 1, 9, 8, 7, 6, 5, 4, 3, 2, 1 which corresponded to the alphanumeric of the English language *backwards*! More amazingly, as shown in the figure, if you sum the alphanumeric equivalents of the English alphabet forwards added to backwards, the Pythagorean integer that always results is nine (9)—the number associated with “completion.”

These, along with many other revelations, convinced the naturopathic physician that language was integrated with math-

Fig. 3.10. Column Showing Multiples of Eights (8)

Multiple of Eights	Reverse Alphabet	Alphabet w/ Numbers	Sum of Two Alphabet #s
1 X 8 = 0 8	8 Z	A 1	9
2 X 8 = 1 6	7 Y	B 2	9
3 X 8 = 2 4	6 X	C 3	9
4 X 8 = 3 2	5 W	D 4	9
5 X 8 = 4 0	4 V	E 5	9
6 X 8 = 4 8	3 U	F 6	9
7 X 8 = 5 6	2 T	G 7	9
8 X 8 = 6 4	1 S	H 8	9
9 X 8 = 7 2	9 R	I 9	9
10 X 8 = 8 0	8 Q	J 1	9
11 X 8 = 8 8	7 P	K 2	9
12 X 8 = 9 6	6 O	L 3	9
13 X 8 = 10 4	5 N	M 4	9
14 X 8 = 11 2	4 M	N 5	9
15 X 8 = 12 0	3 L	O 6	9
16 X 8 = 12 8	2 K	P 7	9
17 X 8 = 13 6	1 J	Q 8	9
18 X 8 = 14 4	9 I	R 9	9
19 X 8 = 15 2	8 H	S 1	9
20 X 8 = 16 0	7 G	T 2	9
21 X 8 = 16 8	6 F	U 3	9
22 X 8 = 17 6	5 E	V 4	9
23 X 8 = 18 4	4 D	W 5	9
24 X 8 = 19 2	3 C	X 6	9
25 X 8 = 20 0	2 B	Y 7	9
26 X 8 = 20 8	1 A	Z 8	9

Column of multiples of eights (8) deciphered according to the Pythagorean skein in which all integers are reduced to single digits using addition of each digit in the whole number. Example: 208=2+0+8=10; then 10=1+0=1. This number is associated with the letter A. When A=1 is added to the reverse alphabet letter Z=8, the sum is 9. The number nine (9) implies completion and results every time the numerical equivalents to letters are similarly added across the forward and reverse alphabet columns.

ematics, and encoded with electromagnetic frequencies of sound that, as Jenny concluded, relayed spiritual messages between people, and between people and the Creator as well.

“Ultimately,” Dr. Puleo concluded, “You can’t take mathematics, or even science, out of God, or God out of science, because that leaves you with only half the picture.”

Early Pirating Activities

Now recall that there were leaders among the German Anglo-Saxons, and later Normans, who were members of European royalty. These people developed the English language to be mathematically reversed from the ancient Sacred Hebrew, Aramaic, and Sanskrit languages, and thus, spiritually compromised! This occurred between 500 to 1,000 years after Christ’s death. Would it serve the Creator or pure evil to have your language be 180 degrees reversed from mathematical, electromagnetic, biospiritual perfection?

We also know that those who did this with the English language were aligned with, and/or corrupted by, a secret society of Freemasons. We know this because the Levitical priesthood, that the Bible tells us were ordained by the Creator to be the keepers of this sacred spiritual knowledge, was also very knowledgeable about Pythagorean mathematics, electromagnetics, and spiritual-energetics. They had dabbled in alchemy, turning lead to gold! Likewise, if they were not aware of Sacred geometry before, we know for certain master masons with whom they worked to create the great Solomon’s Temple taught them much of this knowledge. According to historians, the Grand Master Masons’ knowledge was passed down from at least the time their ancestors had directed the construction of the great Egyptian pyramids.

We also know that this ancient sacred and empowering knowledge was hidden from the masses for at least the past 3,000 years. We know this for certain, since that is when the ancient Levi priests instilled the verse numbers into the Bible along with

these energetically powerful alphanumeric codes.

Do you think that this was done to bless or curse humanity? “Ye shall know them by the fruits of their labor.” Clearly, the creation of the English language further divided the European people, as well as further attenuated the frequency resonance of language attuned to the Creator’s voice and sacred geometry.

For better understanding, Dr. Horowitz refers people to the story in the Bible that discusses the confusion of languages for social and spiritual division and population manipulation. The “Tower of Babel” story begins in Genesis 11:1. It reads, “Now the whole world had one language and a common speech. . . .”

Using common speech, language, and sacred sounds, these empowered people were blessed to fully express their DNA as a function of language bioacoustics and resulting electromagnetics. But soon these Babylonians became self-centered pagans. They built a “tower” that reached into the heavens. “But the Lord came down to see the city and the tower that the men were building. The Lord said, ‘If as one people speaking the same language they have begun to do this, then nothing they plan to do will be impossible for them.’” (See Genesis 11:5-6.)

And since they ceased to care about the Creator, Yah decided to act decisively. He confused their language and thereby promptly removed their power. Genesis 11:7 records how God moved to destroy the earliest Babylonian rulers’ plan. “Come,” the Father said, “let us go down and confuse their language so they will not understand each other.” So, “the Lord scattered them from there over all the earth, and they stopped building the city.”

This lesson was later used by the Anglo-Saxon/English ruling elite who, in the 1500s, aimed to control the world through colonialism and by spreading the new disempowering English language. It appears as though they are on the verge of succeeding.

The Creative Power of Words

Words are powerful electromagnetic frequency generators that have profound physical influence. When people do not understand each other, then fear and hate replaces love and communion. Furthermore, instead of speaking sacred and spiritually uplifting “tongues” (such as Hebrew and Sanskrit), the mathematically reversed language of English created chaos and social and spiritual discord.

It is great Yah listens to your heart, rather than just your mouth!

Like any technology, words can be used for good and evil by good people and bad. As the generally popular and politically controversial “King of the Jews,” Yeshua, counseled us in Matthew 12:34-36:

“For out of the overflow of the heart the mouth speaks. The good man brings good things out of the good stored up in him, and the evil man brings evil things out of the evil stored up in him. But I tell you that men will have to give account on the day of judgment for every careless word they have spoken. For by your words you will be acquitted, and by your words you will be condemned.”

Given our current understanding of DNA and how it functions, Yeshua’s instruction is especially profound. Words are judged immediately against a background of harmonically uplifting frequencies emanating from the Divine universal orchestra. This symphony primarily performs love concertos in the key of life. Your words either resonate amicably with this force, or interfere with it.

In other words, the nature and function of your DNA instantly facilitates your judgement and/or acquittal, particularly since the “Kingdom of Heaven” is so very near. You are, in fact, stand-

ing in it, and it is moving through you right now! Little wonder foulmouthed negative people tend to have more stress related ailments, and often die prematurely, than easy-going happier people. Is this a form of judgement or karma?

Reverse Speech and the English Language

Now the plot thickens. A few years ago, David John Oates, an Australian psychologist, pioneered the field known as “reverse speech.” He became immediately persecuted.

“The English language and speech played backwards,” he claimed, “relays the truth from the soul.” On national radio he played segments of famous people’s speeches, but backwards. Very clearly you could hear completely different messages than expected.

For instance, one speech given by President Bill Clinton played backwards on national radio revealed highly denigrating comments about himself! “I’m nothing but a dirty rotten snake-oil salesman,” Clinton was heard saying in his reverse speech.

Might this have some relationship with brain neurology and differentials between left-brain and right-brain functioning? Theoretically it does.

English, you know, reads from left to right while Hebrew reads from right to left. Why?

Dr. Horowitz believes the English language was developed to spiritually neutralize the masses. If, as the Bible says, “it is not against flesh and blood with whom we do battle,” ultimately our backwards English language is a result of spiritual (and educational) warfare directed against the ignorant masses.

Scientific research shows the right hemisphere of your brain is functionally related more to spirituality and intuitive instincts than to the earthy desires and rational reasoning. The latter is mostly processed in your left hemisphere. Brain function relates to language too. When the direction of reading words and ar-

ticulating them in speech is reversed, as it is when, for example, Divine Hebrew is translated into Babylonian English, it literally violates your mathematical neuro-spiritual connection and optimal brain function.

If you have yet to accept this simple, yet profound, truth about your spoken words creating your life, hell or heaven, then you are not alone. It is especially difficult to comprehend the electromagnetic matrix of creative potential accessed by faith and prayer; through which the spirit, including the Holy Spirit, manifests. This, above all, is what accomplishes healing. But look around, the masses appear to be missing the point. "Ye shall know them by the fruits of their labor." Babylon's entire harvest appears to be rotting! Consumers are more stressed, troubled, obese, and sicker than ever before.

In the chapters ahead, this concept of DNA being central to spiritual warfare on planet Earth will become increasingly clear. You will learn myriad manners through which DNA is being electromagnetically challenged and physically changed, possibly forever. You will learn that modern civilization, said to offer developing nations higher quality of life, is more cult than panacea. From chemical toxins to electrical appliances, your DNA is being bombarded and unnaturally tested. Take heed that it does not become permanently altered.

At the end of this book, you will have a more complete understanding of DNA, and what the Pirates of the Sacred Spiral have been doing in recent years to gain control over it and you. Moreover, you will have far greater knowledge about what you can do to protect your natural genetic inheritance along with your life and health.

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Chapter 4.

The Pirates' Position on DNA

“The artist may be well advised
to keep his work to himself till it is completed,
because no one can readily help him or advise him with it . . .
but the scientist is wiser not to withhold
a single finding or a single conjecture from publicity. ”

Johann Wolfgang von Goethe,
Essay on Experimentation

If you knew a treasure was buried close by, but pirates held the only map to it, you would hardly expect them to simply hand the secret intelligence over to you. They would most likely do whatever possible to keep the treasure's value secret and precise whereabouts hidden. Indeed, this treasure—DNA—holds the power over life and death. Those who have controlled it have gained great wealth and power, and the pirates are currently in a position of stealth strength.

The most responsible way to tell “all about DNA” is from both sides of the debate. We could simply regurgitate what has been stated and repeated ad nauseam regarding DNA, its structure, and alleged primary function of directing the assembly of new life from DNA-copied RNA, and protein synthesis at ribosomes—protein assembly stations, but given the previous three chapters of introduction we would not want to disappoint you. Nor would we want to remain remiss by withholding the whole truth.

Alternatively, *DNA: Pirates of the Sacred Spiral* presents the following discussions taking into account what has been said about DNA by the world's leading representatives of the subject—Rockefeller University and Cold Spring Harbor Labora-

tory spokespersons. We will, however, intersperse facts that are missing, commentaries, and critique providing more advanced science and political perspectives.

For these discussions we will refer to DNA-related “propaganda” featured in the public and scientific domains by these two most authoritative collaborating sources of intelligence in this field. Cold Spring Harbor Laboratory and Rockefeller University, both in New York, are well known by DNA investigators as being the first and foremost citadels for this fare. The authenticity of their material is easily validated by visiting their online presentations and papers.

For those yet to be familiar with Dr. Horowitz’s earlier books, *Emerging Viruses: AIDS & Ebola—Nature, Accident or Intentional?* and *Healing Codes for the Biological Apocalypse*, both of these institutions require a bit of introduction. So we will begin here to relay “all about DNA.”

Pioneering DNA Research at Cold Spring Harbor

Cold Spring Harbor Laboratory (CSH), according to their advertising, “is a research and educational institution.” For more than a century, the laboratory has conducted research programs “focusing on cancer, neurobiology, plant genetics, genomics and bioinformatics.” It espouses a broad educational mission, including the recently established Watson School of Biological Sciences,” and the Dolan DNA Learning Center (DNALC) for the dissemination of public information—what you might consider after reading this book “promotional propaganda.”

According to CSH’s “100 Year History,” their Biological Laboratory was established in 1890 by John D. Jones, the son of John H. The Jones family had diversified their holdings earned initially at sea in shipping and whaling to continue “amassing a sizable fortune” directing the Atlantic Mutual Insurance Company.

The Jones family was well-positioned, and also prolific. John H. Jones, founder of the Cold Spring Harbor Whaling Company

Fig. 4.1. Cold Spring Harbor Laboratories

Online Lectures & Meetings

CSHL is a research and educational institution. The Laboratory has research programs focusing on cancer, neurobiology, plant genetics, genomics and bioinformatics, and a broad educational mission, including the recently established Watson School of Biological Sciences.

COLD SPRING HARBOR LABORATORY

DOLAN DNA LEARNING CENTER **COLD SPRING HARBOR LABORATORY**

Gene Almanac

Links

Search for:

SECOND EDITION

Genome Research

Genome Centers

Department of Energy Human Genome Program

The Human Genome Program of the Department of Energy is focused on reaching the goals of the U.S. Human Genome Project in cooperation with the extramural division of the National Human Genome Research Institute of the National Institutes of Health.

For more than 100 years, Cold Spring Harbor Laboratory (CSH) in New York, intimately collaborating with Rockefeller University, has researched cancer, neurobiology, plant genetics, and human genomics. The above lists a few more institutional affiliates. The complete list presented on this Dolan DNA Learning Center (DNALC) website provides a virtual "who's who" in the world of DNA analysis, biotechnology, and genetic engineering. The DNALC for the dissemination of public information is the chief propaganda arm of CSH and the genetics industry.

DNALC's website takes you to virtually every major "Genome Center" throughout the world including notables such as the U.S. Department of Energy Human Genome Program, the National Human Genome Research Institute, Stanford Human Genome Center, Whitehead Institute Center for Genome Research, Howard Hughes Medical Institute, The Institute for Genomic Research (TIGR) featured later for its leading "pirates," Amgen, Inc.—"the world's largest biotech firm," and the BioSpace Bioscience Company Directory—listing "over 400 biotechnology and pharmaceutical companies, with company profiles, news, and links to corporate web sites." See: www.DNALC.org/

and father of the Biological Laboratory's initial patron John D. Jones, had 84 first cousins. Eugene G. Blackford, a founder of the Biological Laboratory, introduced to the fish market Red Snapper, which was named for him (*Neomaenis blackfordi*).

By the late 19th century, Eugene Blackford, a fishery commissioner of New York State, "was instrumental in persuading members of the Jones family to apply their unused assets to the service of modern science. In 1882, several acres of land and an abandoned woolen mill at the head of the harbor were ceded to New York State as the site of a hatchery for the culture of salt and fresh water species.

“In 1889, Blackford aided Brooklyn Institute President Franklin Hooper in securing from John D. Jones a second gift of land and several derelict Bungtown buildings to found the Biological Laboratory. The first General Course in Biology, begun on July 7, 1890, was actually taught at the fish hatchery; however, within several years a whaling warehouse (now Wawepex Building) was outfitted with a darkroom, workrooms, and lecture rooms.

“In 1898, Charles Davenport, a professor of evolutionary biology at Harvard University, [and infamous leader of the international eugenics movement] became director of the Biological Laboratory. Over the next several years, he introduced a series of courses that investigated ‘the normal variation of animals in the harbor, lakes, and woods, and the production of abnormalities, . . .’”

For many years Davenport (See figure 4.2.), directed three institutions at Cold Spring Harbor: “the Biological Laboratory, the *Carnegie Department of Experimental Evolution*, and the *Eugenics Record Office*.” [Emphasis added.]

“Darwin’s theory dealt with large populations of living things and did not explain how traits are passed from one generation to the next. It was the Austrian monk Gregor Mendel who brought the hereditary process down to the individual organism and provided a hereditary mechanism to drive evolution.

“Gregor Mendel, died in 1884, more than a decade and a half before the importance of his work was understood. His paper, *Experiments in Plant Hybridization*, published in 1865, provided the basis for the *mathematical analysis of inheritance*. From results of controlled crosses of garden peas, he formulated laws to explain how traits are passed from one generation to the next as discreet bits of genetic information. He showed that the expression of a pair of contrasting physical characteristics is controlled by a pair of genes, one of which is donated by each parent.

“Although Mendel was a contemporary of Darwin, his work lay fallow, unrecognized until the beginning of the 20th century. In 1900, Hugo de Vries of the University of Amsterdam and Carl

Fig. 4.2. Professor Charles Davenport, Eugenics Pioneer and Director of CSH



By the early 1900s, prominent American and European industrialists, including the Carnegies, Vanderbilts, Morgans, and Rockefellers, envisioned a world in which social and political pressures brought by the proletariat might be efficiently managed through various methods of population control. On behalf of common interests shared by the Royal Families of Britain and Germany, they heavily funded Cold Spring Harbor Laboratory and its director, Charles Davenport, a pioneer in the "science" of eugenics. Davenport et. al., professed conditions such as "feeble-mindedness," alcohol-

ism, poverty, and shyness were caused by damaged genes. They effectively persuaded American, and later German political leaders, to enact eugenic laws for "ethnic cleansing" and "racial hygiene" that contributed to the rise of the Jewish and Black genocides of the Twentieth Century. See: www.DNALC.org/

Correns of the University of Tübingen rediscovered Mendel's paper and published research that confirmed his earlier work.

"The year following the rediscovery of Mendel's paper, *Andrew Carnegie* sold his Pittsburgh steel mills to *J.P. Morgan* for an estimated \$400 million. Believing that "the man who dies thus rich dies disgraced," he established the Carnegie Institution of Washington as one of several philanthropies through which to divest himself for an honorable death. [Meaning he, thus, kept his vast fortune and estate properties tax free and under family control.] *The Carnegie Institution and John D. Rockefeller's Institute for Biomedical Research, founded the same year, were the nation's major sustained sources of support for the basic biological research during the first four decades of the 20th century.* [Emphasis added.]

“Learning that the Marine Biological Laboratory at Woods Hole had approached the newly-formed Carnegie Institution for support, Charles Davenport quickly counter-proposed the establishment of a field station “to investigate experimentally the origin of species” at Cold Spring Harbor. Davenport’s proposal succeeded, and he became the first director of the Carnegie Institution’s Station for Experimental Evolution, while also retaining leadership of the adjacent Biological Laboratory [and Eugenics Record Office].

“. . . The renaming of the Carnegie operation as the Department of Genetics, in 1921, signaled the completion of the transition from experimental evolution to modern genetics. . . . Carnegie researchers logged almost immediate success. George Shull, who was among the first full-time staff members appointed by Davenport, began breeding experiments with corn in 1905. . . . His results, published in 1908, demonstrated the phenomenon of ‘hybrid vigor’ and formed the basis of modern agricultural genetics.

“At the same time Davenport and Shull were initiating research at Cold Spring Harbor, Thomas Hunt Morgan was setting up his ‘fly-room’ at Columbia University. Trained as an experimental evolutionist, Morgan started breeding experiments with the fruitfly, *Drosophila*, which proved an ideal organism for genetic studies. Over the course of a decade and a half, Morgan and his astoundingly bright cadre of graduate students used linkage—analysis of the co-inheritance of traits—to demonstrate that genes are in a linear arrangement on the chromosome. Their 1915 book, *The Mechanism of Mendelian Heredity*, provided the major theoretical basis of modern genetics.

“The work of Thomas Hunt Morgan established the fruitfly as a workhorse of genetics research. Calvin B. Bridges, who was among Morgan’s most brilliant students, spent several summers at Cold Spring Harbor, and was a staff member of the Carnegie Institution of Washington until his death in 1938 at the age of 49.

Fig. 4.3. Carnegie and the Carnegie Endowment



In 1954, an unprecedented U.S. Congressional investigation into tax-exempt foundations identified the Rockefeller and Carnegie Foundations engagement in a globalistic agenda. The Committee stumbled upon the rewriting of American history by the Rockefeller and Carnegie oligarchy.

Norman Dodd, Research Director for the Congressional Committee, found the following stunning statement of insidious purpose in the archives of the Carnegie Endowment:

"The only way to maintain control of the population was to obtain control of education in the U.S. They realized this was a prodigious task so they approached the Rockefeller Foundation with the suggestion that they go in tandem and that the portion of education which could be considered as domestically oriented be taken over by the Rockefeller Foundation and that portion which was oriented to International matters be taken over by the Carnegie Endowment."

Photo from the *Photograph Album of Andrew Carnegie (1835-1919)* at the Carnegie Free Library. See: <http://heinz1.library.cmu.edu/Andrew/01.htm>

"The opportunity for a busman's holiday in a bucolic setting made Cold Spring Harbor a summer destination for American geneticists. Nettie Stevens of Bryn Mawr College was in residence during the summer of 1906, continuing research published the previous year demonstrating that sex is determined by Mendelian inheritance of distinctive X and Y chromosomes. Calvin Bridges, one of Morgan's brilliant students at Columbia, spent the summer at Cold Spring Harbor during 1914, the year of publication of his seminal paper explaining the inheritance of a sex-linked trait and locating a specific gene on a specific chromosome.

“In 1916, Carnegie scientist Clarence C. Little was among the first scientists to demonstrate a genetic component of cancer. He found that Japanese “waltzing” mice were susceptible to transplanted sarcomas, while other strains were almost entirely resistant. After leaving Cold Spring Harbor in 1923, he later became a founder of the Jackson Laboratory in Bar Harbor, Maine, which was to become the nation’s primary supplier of purebred mice for research.

“Carnegie scientist Clarence C. Little, became director of the American Cancer Society for 16 years. This line of research was continued at Cold Spring Harbor by E. Carleton MacDowell, who in 1928 discovered a strain of mice, C58, which invariably succumbed to spontaneous leukemia. He went on to breed numerous strains of mice with increased resistance or susceptibility to cancer. Little’s and MacDowell’s mouse strains, and numerous genetic combinations derived from them, proved essential to modern cancer research.

“Davenport was among the group of scientists who turned their attention to human genetics. In 1907, he worked out the inheritance of eye color, and later described the genetics of hair and skin color. He became a major proponent of the eugenics movement, the goal of which was the application of genetics for the betterment of humankind.

“In 1910, Davenport persuaded Mrs. E.H. Harriman to devote a fraction of her late husband’s railroad [and banking] fortune to eugenics research. She purchased 75 acres of property on which she established the Eugenics Record Office, adjacent to the Carnegie station. Davenport assembled a human trait handbook and over a period of 15 years trained more than 250 field workers to collect [human] pedigree data. House-to-house surveys and examination of patients’ records in hospitals, prisons, and mental institutions yielded information that resulted in approximately 750,000 genetic records on file.

“Davenport’s application of Mendelian genetics contributed to the understanding of a number of physical disabilities, such

Fig. 4.4. Carnegie Building at Cold Spring Harbor



A 1905 picture of the Carnegie Building at Cold Spring Harbor. The building held the archives of the laboratory, including books, papers, correspondence, and photographs relating to the "scientific" work of eugenics on behalf of leading industrial-

ists who were concerned that overpopulation of "dysgenic" people might challenge their socioeconomic and political agendas. Today, the archives support the research of scholars from around the world who, in keeping with CSH's political biases, and population control agendas of their funding industrialists, continue to collect and disseminate materials (largely propaganda) relating to the contributions of leading geneticists.

From the Photograph Album of Andrew Carnegie (1835-1919) at the Carnegie Free Library. See: <http://heinz1.library.cmu.edu/Andrew/01.htm>

as color blindness, Huntington's chorea, and epilepsy, that are caused by a defect in a single gene. However, he and other eugenicists grossly oversimplified the analysis of complex behaviors that are influenced by many genes [along with psychosocial programming]. *They crossed the line into science fiction when they claimed to show the Mendelian inheritance of traits such as feeble-mindedness, pauperism, shyness, moral control, nomadism, and shiftlessness.* They also tended toward heavy-handed preaching about what constituted the right genetic stuff and admonished that carriers of serious genetic defects should not reproduce. [That is, should be coercively sterilized. Emphasis added.]

"At its best, the American eugenics movement contributed the first basic understanding of humans as genetic organisms. At its worst, it was self-righteously bigoted. [Author's question: *Is bigoted* worse than genocidal?] Regardless [easy for them to write; less easy for victims' families to accept], American eugenicists were pronounced guilty by association with the radical

brand of inhumane genetic *improvement* that arose in fascist Europe during the 1930s. The Eugenics Record Office was closed in 1940 [as those who funded it, along with “Hitler’s” racial programs, felt embarrassed and politically compelled to continue more discretely their selective depopulation programs. Emphasis added.]

Among the founders and early patrons of eugenics “were such notable American entrepreneurs as Walter Jennings and George Pratt, founders of the Standard Oil Company; J.P. Morgan, the banker; Marshall Field III, the Chicago storekeeper; William K. Vanderbilt, whose family built a fortune on the Staten Island Ferry and the New York Central Railroad; Louis Tiffany, whose stained glass creations were already legendary, and national celebrities including Fred Astaire and George Gershwin.”

“The membership applied its wealth and enthusiasm with remarkable results, . . . The Laboratory’s first full-time investigator, Hugo Fricke, did some of the earliest work on the effect of X-rays on living cells. [In other words, x-rays were used to cause genetic damage in various species including select human “volunteers.”] Reginald Harris became the Biological Laboratory’s first full-time director in 1924. No stranger to the institution, he had come to Cold Spring Harbor as a summer researcher in 1918 and married Davenport’s daughter Jane in 1922. . . . In 1930, resident endocrinologists drew national attention when adrenal cortical hormone purified at Cold Spring Harbor was used as the first cure for Addison’s disease. [Author’s note: It is widely known that the adrenal hormone cited, ACTH, rather than “cure” Addison’s disease, merely serves as a replacement for the natural hormone with certain side-effects. Diffuse hyperplasia, that is, excessive growth of the adrenal cortex, and in many instances tumor development, results from ACTH administration. Moreover, the interest in this disease and so-called “cure,” given their eugenics funding and research focus, was likely associated with Addison’s disease patients development of black skin pigmentation due to their primary hormone insufficiency. These eugenic

Fig. 4.5. Eugenacists and Federal Reservists

Pictured here is the non-denomination chapel at Jekyll Island, Georgia. The arched glass picture window boasts eugenics supporter Louis Tiffany's own stained-glass mural dedicated to his unique benefactorsparishioners that, according to the inscription, were granted Divine authority to *control the world's wealth*. These eugenics supporters and Cold Spring Harbor Labs benefactors included some of the world's leading banking, energy, and transportation industrialists. They gathered here to plan the formation of the U.S. Federal Reserve Bank.



Most people today falsely believe that Congress “created” the Federal Reserve. The 1913 “Act” that Congress “passed,” and President Woodrow Wilson signed into law, was authored by this select group of private industrialists who met in deep secrecy and prayed in this chapel. Present were the following bankers and eugenics/CSH patrons: Frank Vanderlip, President of National City Bank of New York; Henry P. Davidson, senior partner of J. P. Morgan Company; and Charles D. Norton, President of Morgan’s First National Bank of New York. These three powerful bankers invited Mr. Paul Moritz Warburg of M. M. Warburg Company of Hamburg, Germany, which was the chief German representative of the European banking family, the Rothschilds. Mr. Warburg masterminded the entire document that we recognize today as the Federal Reserve Act. As a partner of Kuhn, Loeb and Company Bank of New York, he searched for a title that would not alert Congress as to the true intent of the document he had prepared. He used the word “Federal” in the title which gave the false impression that this document involved the Federal Government.

Source: *Dismantling the U.S. Federal Reserve System*. Edited by Frederick Mann and written by Terra Libra Holdings. See: <http://www.buildfreedom.com/tl/tl17a.shtml>

researchers would have certainly been interested in developing a “cure” for black skinned people.]

“Harris saw that the rapid influx of ideas from chemistry, physics and mathematics was splintering biology into a number of subdisciplines. Thus, in 1933, he organized the first Cold Spring Harbor Symposium on Quantitative Biology as a means to increase dialogue between the various scientific factions. . . .

“The merit of Harris’s idea was apparent, and the Rockefeller Foundation began long-term support of the Symposium the following year. The Cold Spring Harbor Symposium has continued annually, except for a three-year hiatus during World War II.” During that war, the Rockefellers, their family-controlled Standard Oil Company, and their European partners most leading CSH patrons, heavily funded Hitler and his Nazi eugenicists as will be discussed in greater detail later. (See figure 4.5 for additional interesting discussion.)

The Dolan DNA “Learning” Center

The **Dolan DNA Learning Center** (DNALC) is an operating unit of Cold Spring Harbor Laboratory and “the world’s first science center devoted entirely to public genetics education,” according to its promotions. (See www.DNALC.org/.) The “official mission” of this organization, “approved by the Cold Spring Harbor Laboratory Board of Trustees,” was stated as follows:

The DNALC extends the Laboratory’s traditional research and postgraduate education mission to the college, precollege, and public levels. Its multidisciplinary staff has experience in elementary, secondary, and collegiate instruction; biochemistry and molecular biological research; design, photography, and fine arts; science journalism; public relations and development; and opinion research [i.e., polling for public persuasion]. Federal grants provide about half of the DNALC’s annual operating budget of nearly \$2,500,000, with the balance provided by foundations, individuals, program fees, and royalties.

The social imperative [Author’s note: the word imperative implies society could not exist without “genetics research”

even though humanity had thrived for millennia without it] of genetics research demands the development of educational resources to build a genetically literate public that supports basic biological research [i.e., mass persuasion on behalf of the genetopharmaceutical industry and related political agendas], understands elements of personal genetic health, and participates effectively in policy issues involving genetic technology and information. The goals of the DNA Learning Center are:

- To serve as a clearinghouse for information on DNA science, genetic medicine, and biotechnology.
- To provide an interactive learning environment for students, teachers, and nonscientists.
- To explore and develop new instructional technologies to make DNA science accessible to the public, and especially, young people.
- To train educators for laboratory-based teaching in genetics.
- To extend enrichment activities to under-served populations — including minorities, the disabled, the economically disadvantaged, and those living in rural/nonurban areas.
- To provide a forum for public discussion of personal, social, and ethical implications of DNA science.

A tour of DNALC's website takes you to virtually every major Genome Center throughout the world including notables such as the Department of Energy Human Genome Program, the National Human Genome Research Institute, Stanford Human Genome Center, Whitehead Institute Center for Genome Research, Howard Hughes Medical Institute, The Institute for Genomic Research (TIGR) to be discussed later in relation to the privatizing of the Human Genome Project, Amgen, Inc.—“the world's largest biotech firm,” and BioSpace Bioscience Company Directory—“a listing of over 400 biotechnology and pharmaceutical companies, with company profiles, news, and links to corporate web sites.” All in all, visitors to the DNALC, a “nonprofit” entity, can quickly conclude the organization operates successfully as a virtual mouthpiece—the principle propaganda arm—for the worldwide genetic biotechnology industry.

Eugenics Information from the DNALC

Eugenics is defined as the “scientific investigation of genetic differences between the races.” It includes the genetic predisposition for diseases that people of varying races and ethnicities may have. Curiously, the following discussion regarding eugenics, sources from the DNALC website. It conveys highly pertinent history regarding *The Pirates of the Sacred Spiral*, such as the central role played by CSH patrons including J.P. Morgan, John D. Rockefeller, the Carnegies, the Vanderbilts along with leading eugenics investigators such as Charles Davenport.

You may wonder why the DNALC, operating in the best interests of its corporate, institutional, and individual sponsors, would broach this controversial and embarrassing topic at all, let alone feature it on its website. The answer is well known in social psychology, behavioral science, and advertising. Technically it is called a “double-sided message.”

Since previous authors, including Dr. Horowitz, Stephan Kuhl, John Loftus and Mark Aarons, Joseph Borkin, Paul Manning, and others, published books and numerous articles in recent decades exposing previously secreted eugenics records, the “cat was let out of the bag.” CSH could ill afford to keep quiet about their “red herring.” Slyly they developed the following treatment of the subject which barely blemishes their reputation. The double-sided message is, “Sure we did this, but we’re really great people otherwise!” Here’s how they worded it:

Examine the Chronicle of how society dealt with mental illness and other “dysgenic” traits in the final installment of our newest website: [DNA Interactive](#). Meet four individuals who became objects of the eugenic movement’s zeal to cleanse society of “bad” genes during the first half of the 20th century. Then meet a modern-day heroine for a personal account of mental illness and the lesson it holds for living in the gene age.

A second more obvious reason eugenics is allowed to be featured by the DNALC is due to the power its patrons wield in forming the mass mind. How many people, after all, visit

their website for information about eugenics—a socially accepted form of genocide? How many people have even heard of the word “eugenics?” This author has done an informal poll. Not many! Especially compared to the populations exposed to mainstream media propaganda that effectively forms the mass mindset of public opinion about the “urgent need” for genetic engineering for evolutionary enrichment in a frantic climate of alleged “overpopulation.” Really, the DNALC, CSH, the U.S. Department of Energy, and their directors in the Anglo-American economic community, have nothing to fear. They can, thus, afford to be brazen.

In fact, the opening line of their eugenics fluff relays the most salient point of these authors' position. Here's their article:

“The philosopher George Santayana said, ‘Those who cannot remember the past are condemned to repeat it.’ This adage is appropriate to our current rush into the ‘gene age,’ which has striking parallels to the eugenics movement of the early decades of the 20th century. Eugenics was, quite literally, an effort to breed better human beings by encouraging the reproduction of people with ‘good’ genes and discouraging those with ‘bad’ genes. Eugenacists effectively lobbied for social legislation to keep racial and ethnic groups separate, to restrict immigration from southern and eastern Europe, and to sterilize people considered ‘genetically unfit.’ Elements of the American eugenics movement were models for the Nazis, whose *radical* adaptation of eugenics culminated in the Holocaust.”[Emphasis added. Notice the word “radical” is comfortably placed above to distinguish between Hilter’s ilk, and those eugenacists in America funded by CSH patrons that also, as you will learn more, funded Hitler and his Third Reich.]

“We now invite you to experience the *unfiltered* story of American eugenics primarily through materials from the Eugenics Record Office at Cold Spring Harbor, which was the center of American eugenics research from 1910-1940.” [Emphasis added.]

This allegation of “unfiltered” truth contradicts, in fact, what the institutes’s own disclaimer. It reads: “During a two-year review process, involving a 14-member Advisory Panel, this site has developed an editorial policy to protect personal privacy and confidentiality. For this reason, names and places have been deleted from pedigrees, medical documents, and personal photographs.”

Okay! So there is some filtering. Let’s continue. . . .

“In the Archive you will see numerous reports, articles, charts, and pedigrees that were considered scientific ‘facts’ in their day. It is important to remind yourself that the vast majority of eugenics work has been completely discredited. *In the final analysis, the eugenic description of human life reflected political and social prejudices, rather than scientific facts.*” [Emphasis was added here because this statement reveals a potential liability, possible lethality, in contemporary genetic research as well as century old eugenics—that is, political and social prejudices. Have political and social prejudices changed dramatically since the time of Hitler? If they had, America and its allies would have no justification for its myriad wars. Keep this in mind as you read the following section concerning the powerful political and economic forces behind the eugenics movement. Ask yourself, “Are current genetic science endeavors susceptible to the same, or similar set of socioeconomic, and more importantly, political forces?”]

Social Origin of Eugenics

“You may find some of the language and images in this Archive offensive,” Professor Allen began. “Even supposedly ‘scientific’ terms used by eugenicists were often pervaded with prejudice against racial, ethnic, and disabled groups. Some terms have no scientific meaning today. For example, ‘feeble-mindedness’ was used as a catchall for a number of real and supposed mental disabilities, and was a common ‘diagnosis’ used to make members of ethnic and racial minority groups appear inferior.

However, we have made no attempt to censor this documentary record to do so would distort the past and diminish the significance of the lessons to be learned from this material.

“When many people first learn about eugenics, they wonder how intelligent people, including highly educated scientists, could have believed so many seemingly bizarre ideas. How could anyone accept the simplistic notion that complex human behaviors are determined by single genes or that mental tests designated more than three-fourths of all Russian and Polish immigrants to the U.S. as feeble-minded?

“To understand why eugenics gained such a following in the first three decades of the 20th century, one needs to examine the economic, social, and political context in which it flourished. Science, or what is claimed to be science, is a product of culture—like any other human activity. What seems in hindsight to be naive or absurd, must have seemed reasonable in its own era. This is especially true when scientific ideas are used to explain social problems.

“American eugenics developed in the wake of turbulent economic and social problems following the Civil War. The rapid growth of American industry, coupled with the increased mechanization of agriculture, created the first major migration away from farms, and cities expanded faster than adequate housing. Wholesale exploitation of labor created militant labor union organizations. Price fluctuations bankrupted many businesses and precipitated a series of depressions, starting in 1873, and reoccurring about every decade through the early 1900s. This further fueled labor unrest. The situation was made worse by an ever-increasing tide of immigrants, mostly from southern and eastern Europe, which peaked just before, and again after, World War I.

“Social Darwinism had attempted to explain away social and economic inequalities as the ‘survival of the fittest.’ However, by the turn of the century, this simplistic idea had been turned on its head. *A declining birthrate among the wealthy and powerful indicated that the captains of industry were, in fact, losing the*

struggle for existence. The working class not only was organizing against them, but they were also out reproducing them. At the same time, traditional approaches to solving the problems of the urban poor—charity, social work, and religious institutions—were proving of little help.” [Emphasis added. Author’s note: These conditions persist today except for the fact that many modern ailments, arguably all man-made, mass medication, and unprecedented levels of media distractions, have effectively placated the populations of developed nations, while plagues such as AIDS have effectively ravaged most underdeveloped countries]

“Solving the new problems of industrialization demanded a change from laissez-faire to managed capitalism—toward the increased role of government and planning in the economic and social sphere. This new philosophy became known as progressivism. Embedded in progressivism was the idea of scientific management—long-range planning by university-trained experts. This new managerial class became increasingly vital to the economic process. In a country that had nurtured a reverence for invention, the use of scientific management [i.e., sophisticated “population control.”] had a special appeal. Progressive reformers had a strong faith in science as the cure-all that would herald in a new era of rational control of both nature and human society. Under these conditions, it is not surprising that the revelations of a new science of genetics gave birth to a new science of social engineering—eugenics.” [Emphasis and clarification added.]

This allegedly frank discussion of eugenics—a pseudo-scientific genocidal movement that came, and supposedly vanished, following Hitler’s disgrace, is reminiscent of an annual report published in 1968 by CSH and Rockefeller affiliated Alfred P. Sloan Foundation. It may be recalled from *Emerging Viruses: AIDS & Ebola—Nature, Accident of Intentional?* (Horowitz, 1998), that Sloan had labored for years as the Chief Executive Officer for the Royal-Family-of-England-controlled General Motors Corporation. As the Second World War was winding down,

Sloan joined the board of directors of New York City's Memorial Hospital for Cancer and Allied Diseases that had collaborated with researchers at CSH. Soon thereafter, Sloan founded the Sloan-Kettering Institute for Cancer Research to administer the hospital's research activities. In 1968, Everett Case, Sloan Foundation president, articulated the seriousness of this time using virtually the same language used by Professor Allen to describe the socio-political correlates and antecedents for eugenics. Case wrote:

The multiplication and growth of many of our besetting social problems seem all too reminiscent of the behavior of the cancerous cell. Who would have predicted at the beginning of this decade that racism would infect and inflame the minds of even a vocal minority of the Negroes who, in this country, have been its principal victims? Who would have foretold the rise in resort to violence not only among the swelling ranks of the criminals but also as a means of social protest and even as a weapon of dissent?(Case, 1968)

Case's next paragraphs were most enlightening and relevant to this eugenics/genocidal agenda discussion:

More effective techniques for the control of population growth are at hand. The genetic code has been deciphered, and the elements of DNA can now be made synthetically. So, too, the hundreds of young scientists who have earned Sloan fellowships in basic research have made important contributions to our understanding of both the macrocosm and the microcosm.

It is different when one leaves the laboratory or the field experiment, and the disciplined minds they attract, for the sprawling, clamorous, and slippery problems which confront, say, the President of the United States or the Mayor of New York City. It is easy to ascribe outbreaks of urban violence to the intolerable conditions of the ghettos. It is easy to ascribe those conditions to the neglect or apathy of the landlords, to the massive immigration of unskilled and disadvantaged Negroes from the South, to the cupidity of the real estate operators and the building trades, or to the ineptitude and corruption of city officials. It is much harder to get at the *root* causes of such phenomena, and even more difficult to discover and apply effective cures. . . .

[S]cience . . . whatever its problems, including the apprehension of a popular revulsion against its untoward consequences, it is clear that science is an enterprise too dynamic to be “turned off” if we would, and too fundamental to our security and our economy to be abandoned if we could. Certainly the search for the causes and possible cures of cancer must be accelerated, not brought to a halt. Together with technology, engineering and management, moreover, science has an indispensable role to play in any effective assault society may launch upon the stubborn complexities of our urban problems. (Case, 1968)

Dr. Horowitz concluded from this, and other related documents, (Horowitz, 1998) that the Sloan Foundation then implemented special grant programs. These were consistent with the COINTELPRO’s (Black Nationalist Hate Group) campaign against Black Americans. It was allegedly instituted to dissuade Black America against violent revolution. It also refined resources channeled to the Black underclass consistent with the targeted objectives of National Security Memorandum 46, for “public management,” as discussed previously by Horowitz (2001). Assuredly, these programs and governmental policies fulfilled Alfred P. Sloan’s goal to take advantage of people’s “ignorance of the principles of capitalism and free enterprise.” This opportunity included the genocidal capability of the medicalindustrial complex that included genetic engineering, cancer research, and other iatrogenic (man-made, drug-induced) forms of population control. Consider these parallels as well as you read further in Allen’s official eugenics essay.

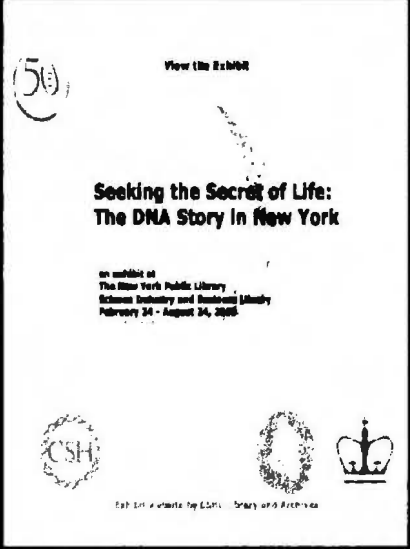
Professor Allen continued, “Genetics appeared to explain the underlying cause of human social problems—such as pauperism, feeble-mindedness, alcoholism, rebelliousness, nomadism, criminality, and prostitution—as the inheritance of defective germ plasm. Eugenicists argued that society paid a high price by allowing the birth of defective individuals who would have to be cared for by the [corporate] state [which also risked heightened proletariate and ethnic revolts]. Sterilization of one defective adult could save future generations thousands of dollars. [Clarifications added.]

“Eugenicists and their wealthy supporters also shared a mutual antipathy for political radicalism and class struggle. They were alarmed by the increasing strength of militant labor unions and the rise of the American socialist party, especially after the success of the Bolshevik Revolution in 1917. These movements were, to some extent, correctly judged to be associated with immigrants from southern Europe, especially Italians, eastern Europeans, and Jews. These new immigrants were seen as troublemakers, and the eugenicists purported to have data showing that the problem was in their genes. The solution to the problem was simple—selective immigration restriction [sterilization, and other forms of “racial hygiene”].

“Eugenics was seen as a way to solve all of these combined problems because it placed the cause in the defective germ plasm of individuals and ethnic groups, and not in the structure of society itself. *Eugenics used the cover of science to blame the victims for their own problems. Eugenicists seemed to have the weight of rigorous, quantitative, and thus scientific evidence on their side. To those with economic and social power—and imbued with the new spirit of scientific planning—eugenicists appeared to offer a rational and efficient approach of treating social problems.* [Emphasis and clarification added.]

“In an era troubled by rapid and seemingly chaotic change, eugenics offered the prospect of a planned, gradual, and smooth transition to a more harmonious future. With its emphasis on planned breeding, eugenics provided the biological counterpart to new theories of scientific control and rational management in business. Just as a new group of professional managers was making a place for itself in American economic life, eugenicists emerged as scientists with a special expertise in the solution of perennial social problems. Eugenics provided what seemed to offer an objective, scientific approach to problems that previously had been cast almost wholly in subjective, humanitarian terms. Whereas charity and state welfare had treated only symptoms, eugenics promised to attack social problems at their roots.”

Fig. 4.6. Rockefeller Univ., CSH and Royal Family Logos on Entrance to "The DNA Story" in New York



The poster for the exhibit "Seeking the Secret of Life: The DNA Story in New York" is displayed. It features a central graphic of a DNA double helix. Above the helix is a circular logo with the number "50" inside. Below the helix, the text reads: "Seeking the Secret of Life: The DNA Story in New York". Further down, it says "on exhibit at The New York Public Library, Schomburg Library and Astor Lenox Tilden Library February 24 - August 24, 2008". At the bottom of the poster are three logos: the CSH logo, the Rockefeller University logo, and the British Royal Family logo (a crown).

The logos for Cold Spring Harbor Laboratory, Rockefeller University, and Europe's Royalty are prominently displayed on the Internet entrance to the New York Public Library's "Seeking the Secret of Life: The DNA Story in New York" exhibit. One might ask, "What are their little known associations?" The Rockefeller family of America, initially financed in the late 1800s by the Rothschild royal banking family of Europe, monopolized on behalf of their Anglo-American partners, the entire fields of American medicine and public health by the early 1900s. By the 1920s, among their principle acquisitions were the American cancer society and cancer industry in general; and all of organized medicine. Throughout the 1900s, these remained heavily influenced, if not completely controlled, by Rockefeller controlled and/or affiliated organizations, institutions, and foundations. During the early 1900s, the budget of the Rockefeller Institute alone was many times larger than the federal government's for medical research. Thus, by 1938, and the beginning of WWII, Rockefeller omnipotence over American medicine, pharmaceuticals, public health, and genetics was certain. Source of graphic: <http://nucleus.cshl>.

Rockefeller University's Rockefeller Archive Center

A brisk click on the link *Rockefeller Archive Center* from Professor Allen's lead page brings you to a Rockefeller University site that features the words "Visit the New Virtual Exhibit: Seeking the Secret of Life: The DNA Story in New York." Figure 4.6 documents curious close associations between Cold Spring Harbor (CSH), Rockefeller University, and on the other side of the DNA double helix graphic, symbols for the Royal bloodline—the British Royal Crown and the British Royalty's Lion. This might strike you as odd. Rockefellers are little known to be related to European royalty.

From this welcoming page visitors may enter the virtual exhibit, and tour its “rooms,” conveniently directed by a strip of DNA.

What is DNA?

“Somehow, every point in the structure of nucleic acids was reached with great difficulty by the paths of error and controversy,” stated Phoebus A.T. Levene, among the earliest geneticists at Rockefeller Labs, in the opening text of the website.

The tour moves to explain that “DNA is a complex molecule containing life’s instructions. Today DNA is a household word. The daily news is filled with stories about DNA profiling, DNA testing for inherited diseases and the development of gene therapy, genetically modified foods, and the biotechnology industry. Fifty years ago scientists worked out the chemical structure of the DNA molecule: one of the most important scientific discoveries of the 20th century. But one hundred years ago, chemists were just beginning to isolate and analyze the molecules that lie within the nuclei of cells.

Chemical Definitions and DNA Structure

DNA stands for deoxyribonucleic acid. Phoebus A.T. Levene examined how DNA’s four nucleotide components are linked together. This work was completed much later by James Watson and Francis Crick at the Cavendish Laboratory in Cambridge, England. Using x-ray *crystallography*, they showed that DNA is shaped like a twisted ladder. Alternating sequences of DNA’s building blocks, they noted, were strung together in a double helix. These blocks were named nucleotides. They consist of a deoxyribose sugar, a phosphate group, and one of four nitrogen bases—adenine (A), thymine (T), guanine (G), and cytosine (C). Phosphates and sugars of adjacent nucleotides link to form the long DNA crystal polymer. Experiments showed that the ratios of A-to-T and G-to-C in DNA are constant throughout life. Figure 4.7 presents this graphically.

The alternating deoxyribose and phosphate molecules form the twisted uprights of the DNA ladder. Complementary pairs of nitrogen bases form the rungs of the ladder whereby A is always paired with T and G always paired with C.

Due to the “obligatory pairing of adenine-to-thymine and guanine-to-cytosine, Watson and Crick proposed that one half of the DNA ladder serves as a template for recreating the other half during DNA replication. By 1958, two lines of evidence came together to provide proof of this hypothesis. First, an enzyme was discovered—DNA polymerase—that adds complementary nucleotides to the template provided by a half DNA molecule.

“Second, an ingenious experiment used nitrogen isotopes to follow the construction of new DNA molecules during successive generations of bacteria. This showed that one strand of each DNA molecule is passed along unchanged to each of two daughter cells. This ‘conserved’ strand acts as the template for DNA polymerase to synthesize a second complementary strand, which completes each new DNA molecule.

“DNA is found mostly in the cell nucleus, but another type of nucleic acid, RNA, is common in the cytoplasm. Watson and Crick proposed that RNA must copy the DNA message in the nucleus and carry it out to the cytoplasm where, at a subcellular organelle called the ribosome, proteins are made based on the code. Crick also predicted the existence of an ‘adaptor’ molecule that reads the genetic code and selects the appropriate amino acids to add to growing protein polypeptide chains.

Later it was learned, “several types of RNA are involved in the utilization of genetic information. In the nucleus, the DNA code is ‘transcribed,’ or copied, into a messenger RNA (mRNA) molecule. In the cytoplasm, the mRNA code is ‘translated’ into amino acids. Translation is orchestrated at the ribosome—itsself partly composed of RNA—with transfer RNA (tRNA) playing the role of adaptor.

“The genetic code had to be a ‘language’—using the DNA alphabet of A,T,C, and G—that produced enough DNA ‘words’ to

specify each of the 20 known amino acids. Simple math showed that only 16 words are possible from a two-letter combination, but a three-letter code produces 64 possible words. Operating on the principle that the simplest solution is often correct, researchers assumed a three-letter code called a codon.

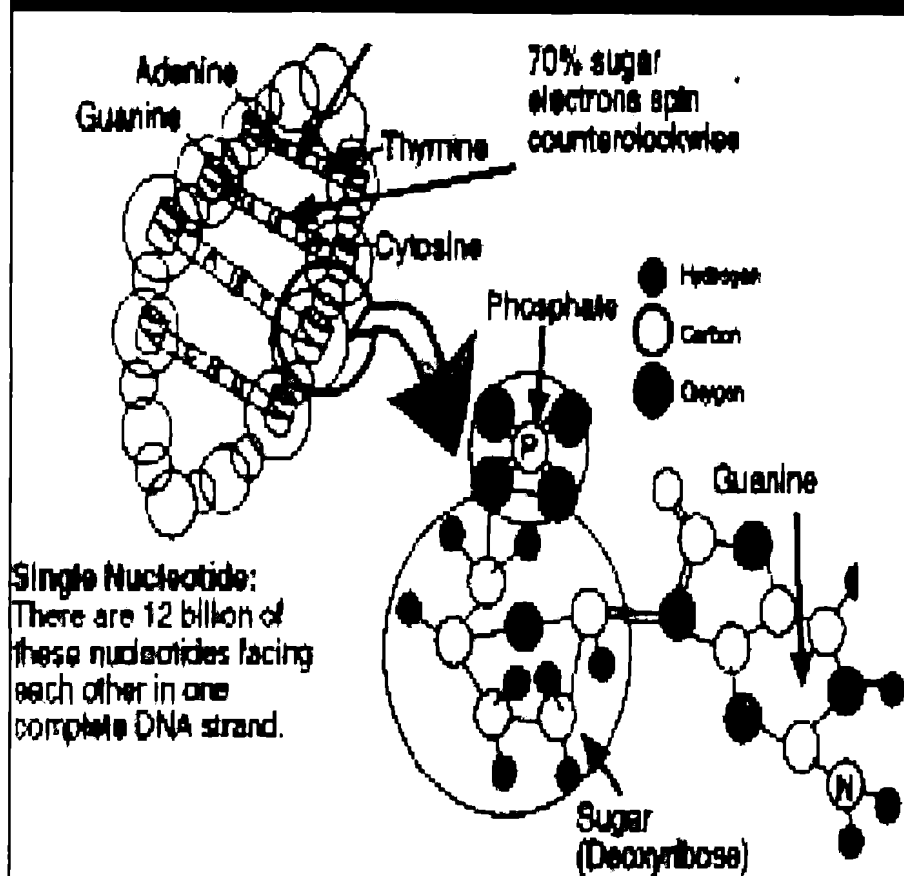
“Research teams at the University of British Columbia and the National Institutes of Health laboriously synthesized different RNA molecules, each a long strand composed of a single repeated codon. Then, each type of synthetic RNA was added to a cell-free translation system containing ribosomes, transfer RNAs, and amino acids. As predicted, each type of synthetic RNA produced a polypeptide chain composed of repeated units of a single amino acid. Several codons are ‘stop’ signals and many amino acids are specified by several different codons, accounting for all 64 three-letter combinations. . . . The triplet genetic code further refined the definition of a gene as a discrete sequence of DNA encoding a protein—beginning with a ‘start’ codon and ending with a ‘stop’ codon.”

DNALC Rebuttal

From here, further physical explanations of DNA-to-RNA-to-protein synthesis become highly technical and confusing, and downright contradictory. If simplicity is the litmus test, there is obviously something very wrong or missing in this Cartesian method of regenerating life. Take for instance the following DNALC explanation of RNA-messaging inconsistencies:

“Dogma and logic dictated that the mRNA code is a faithful representation of the DNA from which it is transcribed. This exact correspondence between mRNA sequence and DNA sequence was generally upheld in experiments with bacterial cells (prokaryotes). However, inconsistencies surfaced as recombinant-DNA techniques allowed researchers to explore the genes of higher cells (eukaryotes). Then, it was found that mRNA transcripts appeared to be shorter than their corresponding genes.

Fig. 4.7. DNA's Nucleotide Construction



The DNA Learning Center (DNALC) presents the same old story about DNA's molecular composition of nucleotides. These building blocks for the Sacred Spiral are composed of a deoxyribose sugar, a phosphate group, and one of four nitrogen bases—adenine (A), thymine (T), guanine (G), and cytosine (C). Phosphates and sugars of adjacent nucleotides link to form the long DNA crystal polymer. Experiments showed that the ratios of A-to-T and G-to-C in DNA are constant.

The skeleton on the right sources from the cover of DNALC's 2002 Report. Any relationship between the skull and bones depicted here, and the "Jolly Roger"—the skull and crossed bones—identifying pirates, is purely coincidental. Or is it?

Fig. 4.8. DNALC 2002 Annual Report Cover



Dolan DNA Learning Center

2002 Annual Report



Even Hollywood has gotten into their unique form of truth-telling with the release of the film "The Skulls." The movie is a fictionalized episode from Yale University's notorious fraternity, the Skull and Bones, known to cater to Anglo-American elites being groomed for world leadership.

In 2001 an independent filmmaker secretly videotaped one of The Skull's pledging ceremonies. The group was filmed conducting mock killings and kissing skulls—exercises befitting desensitization for serial homicide, even genocide. Source of graphic: The DNA Learning Center.

This difference became obvious in electron micrographs of mRNA bound to its complementary DNA template—where regions of DNA without corresponding mRNA form loops.

“In fact, the protein coding information in genes is interrupted by non-coding sequences called introns, which results in ‘split genes.’” The entire DNA code is faithfully transcribed into a temporary form of RNA (pre-mRNA), but this is edited in the nucleus to yield a mature mRNA. The process of RNA splicing involves removing non-coding regions, nucleic acid, and splicing together adjacent coding regions, exons.”

All of this may, however, be an artifact of the recombinant-DNA techniques employed. More importantly, the mechanistic model of genetics expressed above by the DNALC has become largely, if not entirely, undermined by recent advances in water science, electrochemistry, nanotechnology, and the physics of bioelectric phenomena.

For this reason, we now turn our interest to the control of genes from outside of cells, that is, from the environment, including from potentially Divine sources. In contrast to the DNALC, we will primarily focus on the electromagnetic matrix of universal, and/or spiritual, energy discussed in previous chapters. Alternatively, we recognize that modern mainstream DNA evangelists have heavily invested in hormones and neurohumors (blood chemicals) to explain genetic regulation of growth and development. They barely allude to, likely for fear of embarrassment, natural energy as a far more rational and holistic approach to understanding life’s physical manifestation and underlying science of creationism. Cellular up-regulation occurs from the energetically empowered Sacred Spiral. You will now learn about this bioacoustic and electromagnetic creationistic system beginning at the level of your DNA.

Chapter 5.

Gene-Environment Interaction

“There is harmony of the organism and a harmony in structure that allows the transfer of energy so that the organism can live and vibrate. So it can carry on its metabolism and its replication. Those harmonies and resonances must be perceived as inherently musical, because those harmonies recur and recreate the organism. . . . Ultimately, there is a musical or harmonic element within the organism which can recreate the patterns of information and energy. This is beautiful and resurgent. This is molecular music, fragile, dependent, recurring under the right conditions, based in quantum echoes and hidden physics. ”

Merrill Garnett, D.M.D., Ph.D.,
First Pulse: A Personal Journey in Cancer Research

In *The Emperor's New Clothes*, his majesty the king paraded before everyone completely nude. In other words, he was *royally exposed*. Yet only one young man had the guts to declare the eccentric monarch naked. Is this an allegory for what is ongoing today regarding DNA? These authors feel much like this brave young renegade. We appreciate the whole truth about DNA, and herein expose those who stand naked as they work to co-opt and corrupt the Sacred Spiral's power.

DNA plays a significant, likely Divine, role in precipitating, inspiring, and sustaining life bioacoustically and energetically. The double helix is a dual function receiver and transmitter for physical and spiritual empowerment. If the last chapter failed to persuade you of the legitimacy of this thesis, this chapter, packed with referenced scientific determinations, may be more convincing.

Herein we present two genetic likelihoods, even realities: 1) there are global political and economic forces effectively work-

ing to suppress scientific knowledge while manipulating the mass mind in efforts to profit from general ignorance regarding the vital role DNA plays in the energetic (i.e., spiritual) functions of life, and 2) we are in great, even dire, need for a “reality check” regarding the “Sacred Spiral.” Its primary function supersedes mere protein synthesis. DNA directs electromagnetic (i.e., energetic) signaling from our environment, including the Divinely-directed and balanced cosmos, through our cells and tissues. This enables every physical manifestation and physiological function, including the miracle of spontaneous natural, and/or spiritual regeneration (i.e., healing).

Antagonistically, mainstream health authorities and genetic experts, such as those at the U.S. Centers for Disease Control and Prevention (CDC), argue that many, and maybe most, human diseases result from genetic susceptibilities or mutations in combination with modifiable environmental risks. These environmental factors addressed by world renowned sources of health intelligence include infectious, chemical, physical, nutritional, and behavioral risk factors. Virtually zero mention is ever made of bioacoustic, electromagnetic, energetic, or even more esoteric, “spiritual” disturbances of DNA in gene-related ailments.

For example, according to an August 2000 report by the CDC entitled, “Gene-Environment Interaction Fact Sheet,” the newly-formed, Office of Environment Interaction and Disease Prevention, gave nil indication electrogenetics played an essential role in DNA expression. No mention at all that electromagnetic fields, including subtle ones coming from powerlines and electrical appliances, influence genetic regulation of life. They simply provided partial truths which, all told, presented nearly complete lies. (See figure 5.1.)

Spin doctors at the CDC stated that, “[i]nformation from the Human Genome Project has caused scientists to reexamine the role of genetics and other risk factors involved in the development of disease. Understanding this complex interplay of genes

and environment will lead us to new methods of disease detection and prevention. This is perhaps the most important fact in understanding the role of genetics and environment in the development of disease.”

This is nothing new. The truth is, these subjects had been given quintessential scientific attention prior to the Human Genome Project. In fact, the entire project was originally directed to incorporate these scientific subjects.

“Many people tend to classify the cause of disease as either genetic or environmental. Indeed, some rare diseases, such as Huntington or Tay Sachs disease, may be the result of a deficiency of a single gene product, but these diseases represent a very small proportion of all human disease,” The CDC more accurately continued, “Common diseases, such as diabetes or cancer, are a result of the complex interplay of genetic and environmental factors.”

Addressing the physicochemical, yet avoiding electromagnetic or biospiritual, forces involved in the etiology of diseases, the CDC statement continued, “Variations in genetic makeup are associated with almost all disease. Even so-called single-gene disorders actually develop from the interaction of both genetic and environmental factors. For example, phenylketonuria (PKU) results from a genetic variant that leads to deficient metabolism of the amino acid phenylalanine; in the presence of normal protein intake, phenylalanine accumulates and is neurotoxic. PKU occurs only when both the genetic variant (phenylalanine hydroxylase deficiency) and the environmental exposure (dietary phenylalanine) are present.

“Genetic variations do not cause disease but rather influence a person’s susceptibility to environmental factors.”

Thus, health officials admitted, “We do not inherit a disease state per se. Instead, we inherit a set of susceptibility factors to certain effects of environmental factors and, therefore, inherit a higher risk for certain diseases.

“This concept also explains why individuals are differently affected by the same environmental factors. For example, some health conscious individuals with ‘acceptable’ cholesterol levels suffer myocardial infarction at age 40. Other individuals seem immune to heart disease in spite of smoking, poor diet, and obesity. Genetic variations account, at least in part, for this difference in response to the same environmental factors.

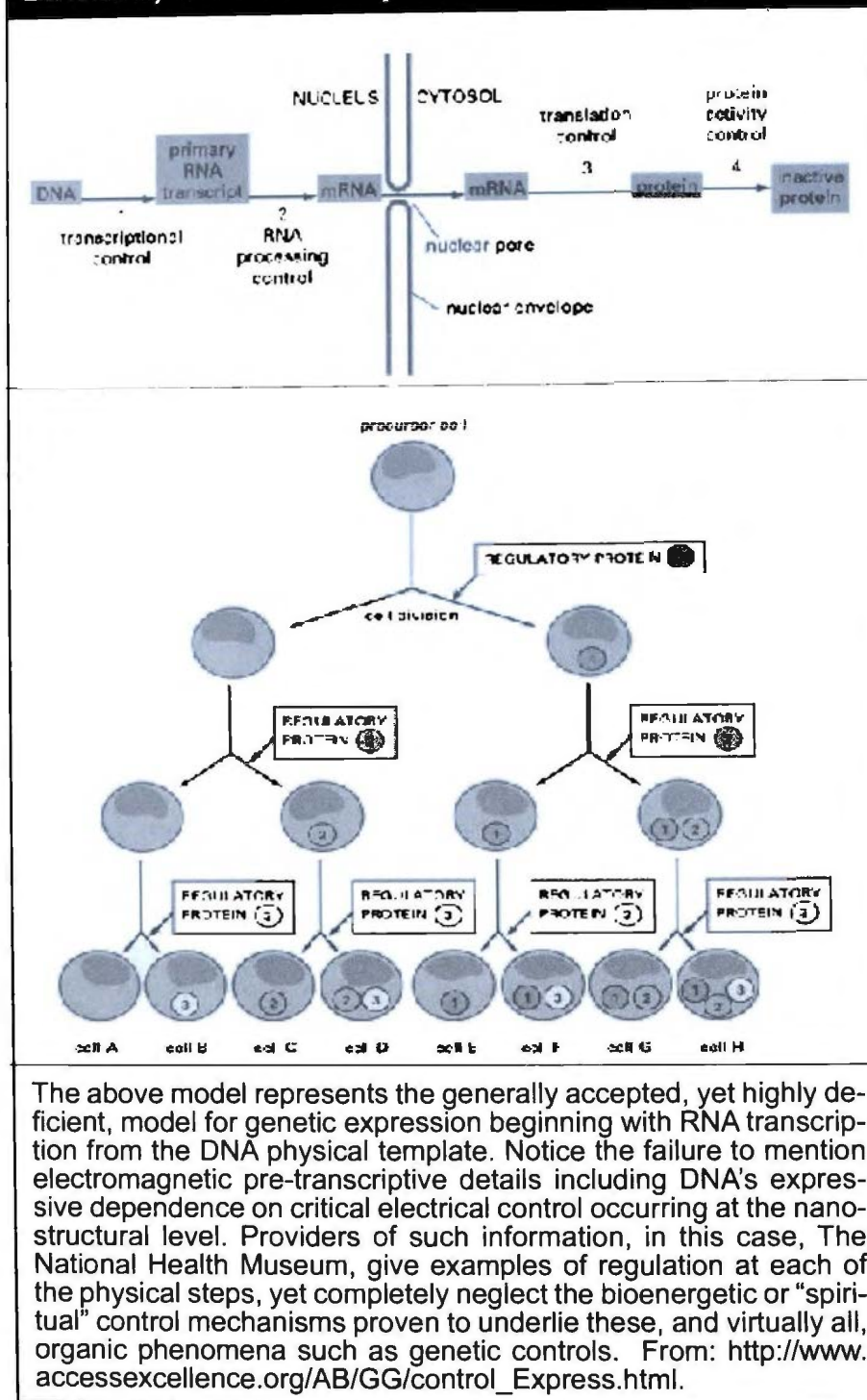
“Genetic information can be used to target interventions. We all carry genetic variants that increase our susceptibility to some diseases.

“By identifying and characterizing gene-environment interactions, we have more opportunities to effectively target intervention strategies. Many of the genetic risk factors for diseases have not been identified, and the complex interaction of genes with other genes, and genes with environmental factors, is not yet understood. Clinical and epidemiological studies are necessary to further describe these factors and their interactions. However, as our understanding of genetic variations increases, so should our knowledge of environmental factors, so that ultimately, genetic information can be used to plan appropriate intervention strategies for high-risk individuals.”(CDC, 2001)

Introduction to the Electrical Properties of Cells

As Dr. Steve Haltiwanger correctly noted in his previous publications on the electromagnetics of cancer, the above jargon concerning the need to study genetic and environmental interactions, and related biological reactions, began 100 years ago in the Western world. By the early 1900s, this limited view became the prevailing, and really exclusive, paradigm used to explain cellular functions and disease progression. The pharmaceutical and cancer industries subsequently became very successful using this model in developing their profit centers, all with potentially devastating side effects on individuals, society at large, and civilization as a whole. As medicine became transformed into

Fig. 5.1. Generally Accepted, Fundamentally Limited, Control Steps for Genetic Expression



a huge business (i.e., mega-monopoly) during the 20th century, medical treatments became largely based on this knowledge and profit incentive. At this time, the supremacy of the biochemical mechanistic paradigm as applied to genetics caused almost all research in genetics and medical science to be directed toward understanding mechanisms that may be influenced by patentable drugs and vaccines.

Many biological questions, however, can only be partially answered with biochemical explanations. More fruitful determinations and reconciliations of otherwise persistent questions have come by examining the role of endogenously created electromagnetic fields and electrical currents in the body.(Haltiwanger, 2003)

Albert Szent-Gyorgyi in his book *Bioelectronics* voiced his concern about some of the open questions in biology: “No doubt, molecular biochemistry has harvested the greatest success and has given a solid foundation to biology. However, there are indications that it has overlooked major problems, if not a whole dimension, for some of the existing questions remain unanswered, if not unasked.” (Szent-Gyorgyi, 1968) Szent-Gyorgyi reported that the cells of the body possess *electrical mechanisms* and use electricity to regulate and control the transduction of chemical energy and other life processes.

In his 1970 book, *Electromagnetic fields and Life*, Dr. Aleksander Samuilovich Presman, identified several significant effects of the interaction of electromagnetic fields with living organisms. Electromagnetic fields: 1) have *information and communication roles* in that they are employed by living organisms as information conveyors. This electromagnetic information flows from the environment to the organism, within the organism, and among organisms, and 2) such energies are involved in life’s vital processes in that they *facilitate pattern formation, physical organization, and growth control* within the organism.(Presman, 1970)

If living organisms possess the ability to utilize electromagnetic fields and electricity there must exist physical structures within the cells that facilitate the sensing, transducing, storing, and transmitting of this form of energy. DNA plays a major role in all of the above.(Miller, et. al., 2002)

Normal cells possess the ability to communicate information within themselves and to other cells. The coordination of information by the cells of the body is involved in the regulation and integration of cellular functions, cell growth, tissue responses and whole organ reactions. Moreover, when pathology strikes, it is apparent, given most recent revelations in molecular biology and electrochemistry, these coordinated information channels are disrupted.(Haltiwanger, 2003)

Throughout the next few chapters we will use examples from the realm of cancer to illustrate and reinforce certain points. We do not do this solely because of the intimate relationship between genetic dysfunction and cancer. Nor do we do this because “gene therapy,” according to its proponents, offers salvation through modern medicine along with the “cancer answer.” Our use of examples from the cancer world is not because the forces we call “Pirates of the Sacred Spiral” also control the cancer industry. Alternatively, as cancer is now predicted to strike one-out-of-two people in the coming years, perhaps it is time to tell all that we know about it free of censorship or institutionalized bias.

Using cancer as an example, cancer cells cease to be regulated by normal bioelectric control mechanisms.

When an injury occurs in the body, normal cells proliferate and either replace the destroyed and damaged cells with new cells or scar tissue. One characteristic feature of both proliferating cells and cancer cells is that these cells have cell membrane potentials that are *lower* than the cell membrane potential of healthy adult cells.(Cone, 1975)

After the repair is completed, and the normal cells in the area of injury stop growing, cell membrane potentials return to normal. Likewise, *in cancerous tissue, the electrical potential*

of cell membranes is maintained at a lower level, and electrical connections are disrupted. Emphasis is placed here due to the important implications of this knowledge on understanding cancer, the carcinogenic (inadequate) immune response, and cancer therapies all to be discussed later.

Cancerous cells also possess other features that are different from normal proliferating cells. Normal cells are well organized in their growth, form strong contacts with their neighbors, and stop growing at the right time. When they repair an injured area (due to contact inhibition with other cells) they stop growing. In contrast to normal cells, cancer cells are more easily detached and fail to exhibit contact inhibition of their growth. Cancer cells become estranged from normal tissue. They become bioelectrically and biochemically self-sustaining. Tissue and intercellular signaling is diminished. Growth control mechanisms fall away. In a sense, cancer cells become out-of-sync from the rest of the body.

This chapter focuses on some of these gene-environmental interactions and abnormalities that have been identified especially in cancer cells that contribute to pathology and loss of growth control.

DNA in an Electrical Circuit

Your television is graphically animated as an electrical box because it receives energy signals through thin air. Likewise, we have come to the conclusion that your liquid crystal components, within your cells and extracellular matrix of your body, possess many of the features of televisions, computers, and electronic circuits. Components analogous to conductors, semiconductors, resistors, transistors, capacitors, inductor coils, transducers, switches, generators and batteries exist in you and in all biological tissues.

Examples of components that allow your cells to function as a solid-state electronic device include: transducers (membrane receptors), inductors (membrane receptors and DNA), capaci-

tors (cell and organelle membranes), resonators (membranes and DNA), tuning circuits (membrane-protein complexes), and semi-conductors (liquid crystal protein polymers).

Begging your pardon for a momentary diversion and point-of-clarification, this information is understandably complex. Especially if you are an average lay reader instead of an electrical engineer. We will, however, make every effort to simplify forthcoming discussions where we can to make this scientific knowledge generally intelligible.

Many of these energetic processes occur simultaneously. So in grouping information into specific areas, we present information repeatedly, knowing that “repetition is the mother of memory and habit.” We, thus, hope to enable you to easily commit these truths to heart and mind. Especially the major hypothesis of this book that diseased or cancer cells are in “spiritual crisis.” That is, they have different electrical and metabolic properties impacting DNA’s bioelectric expression. The recognition that diseased and cancer cells have different electrical properties leads to our hypothesis in Chapter 12 that therapies that address these electrical abnormalities may have some, and likely superior, therapeutic value.

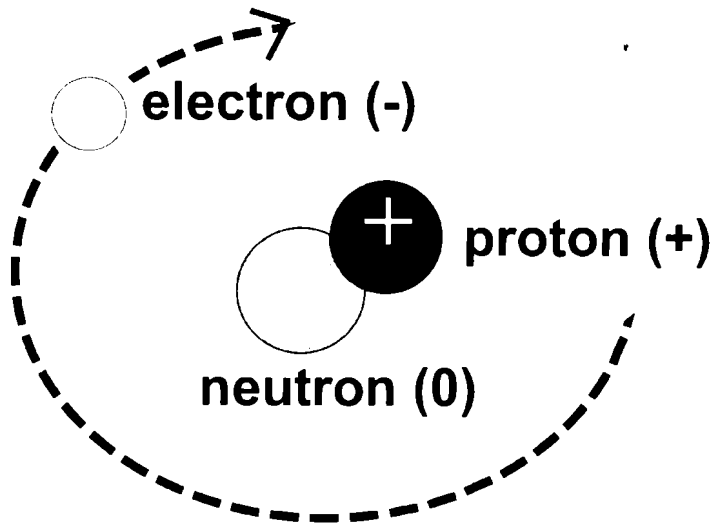
Charge Carriers and Electrical Properties of Cells

In order to help orient you to this emerging field of electro-genetics and energy medicine, this section summarizes the basic characteristics of energy systems, including cells and intercellular structures comprising whole organisms.

To begin, it is widely recognized that cells of the body are composed of matter. Matter itself is composed of atoms, which are mixtures of negatively charged electrons, positively charged protons, and electrically neutral neutrons. These are the main components engaged in atomic energy transfer. (See figure 5.2.)

Electrical charges (i.e., forces of energy) come into play potentially affecting every part of you (as in the case of radia-

Fig. 5.2. Charges of Atomic Structures



The diagram above, for beginners, depicts a basic atom with three pieces to it. Two represent *charged* components a negatively charged (-) electron that can spin off from the atom, and a positively charged (+) proton. A neutron with essentially zero (0) charge is also present. As you may know, there are more than 100 different elements in the **PERIODIC TABLE**. What makes those elements different is the number of electrons, protons, and neutrons. The protons and neutrons are in the center of the atom. Scientists call the center of the atom the *nucleus*, distinct from a cell's nucleus that contains core genetic material. Equal numbers of electrons and protons are typically in atoms. Electrons spin around the nucleus at certain energy levels (or orbital shells) that surround the nucleus.

Electrons are always moving and spinning. This movement and spin is very important in determining the energetic properties of each element. As electrons spin they can move in any direction, so long as they remain in their shells. Electrons in the first shell are always closer to the nucleus than the electrons in higher level orbits or shells.

Shells are named using letters (k,l,m,n,o,p and q) based on their orbit level. The "k" shell is closest to the nucleus while "q" is furthest away. Different shells hold different numbers of electrons. The k-shell holds two; the l-shell holds eight electrons, and it increases from there. Researchers can only approximate where electrons will be at any moment due to their rapid movement. According to quantum theory, an electron can be found anywhere around the nucleus. Using advanced math, scientists are able to approximate, or guess, that electrons are in general areas.

tion-induced genetic mutations leading to cancer and premature demise). This can happen when an electron is forced out of its orbit around the nucleus of an atom. Indeed, the electron's action is known as electricity.

Basic physics and electrodynamics holds that an electron, an atom, or a material with an excess of electrons, has a negative charge. An atom or a substance with a deficiency of electrons has a positive charge.

Like Charges Repel/Unlike Charges Attract

Electrical or energetic potentials are created in biological structures when charges are separated. This is important because electrical potentials possess the capacity to do work.

Although energy industrialists, for their sole fiscal benefit, have formed an alternative consensus, *electric fields* such as those emitted by powerlines, cellphone towers, and home appliances including television, can have profound biological effects. Cumulative damage may result from subtle chronic exposures. Such electric fields form around any electric charge, according to numerous authorities, including those within your cells.(Becker, 1985).

The potential difference between two points produces an electric field represented by electric lines of flux. *The negative pole always has more electrons than the positive pole.*

Electricity is simply defined as the flow of mobile charge carriers in a conductor, or a semiconductor, from areas of high charge to areas of low charge driven by the electrical force. Any machinery, whether mechanical or biological, that possesses the ability to harness this electrical force has the ability to do work.

Voltage, also called the *potential difference* or *electromotive force* is based on the understanding that an electrical current will only flow when it gets a push. When two areas of different charge are connected, whether at the ends of two wires or two cell membranes, a current will flow in an attempt to equalize the charge

difference. The difference in potential between two points gives rise to a voltage, which causes charge carriers to move and current to flow between the two connected points. This force causes motion of *current* carriers and *work* to be done.

A *current* is the rate of flow of charge carriers in a substance past a point. The unit of current measure is called the *ampere*. In inorganic materials electrons carry the current. In biological tissues both mobile ions and electrons carry currents.

In order to make electrical currents flow, a potential difference must exist. The excess electrons on the negatively charged material will be pulled toward the positively charged material.

As shown in figure 5.3, a flowing electric current always produces an expanding magnetic field with lines of force at a 90-degree angle to the direction of current flow. When a current increases or decreases, the magnetic field strength increases or decreases the same way.

More About Your Electrical Components

In electrical terms, a *conductor* is a material in which the electrons are mobile. Alternatively, an insulator is a material that has very few free electrons. A *semiconductor* is a material that has properties of both insulators and conductors. In general, semiconductors conduct electricity in one direction better than they will in the other direction. Semiconductors function as conductors or as insulators depending on the direction the current is flowing.

No material, whether biological or non-biological, will perfectly conduct electricity. All materials will resist the flow of an electric charge through it, causing a dissipation of energy as heat. This block in free energy flow is called *resistance*. It is measured in ohms, according to Ohm's law. In simple DC circuits, resistance equals *impedance*.

Impedance denotes the relation between the voltage and the current in a component or system. Impedance is usually de-

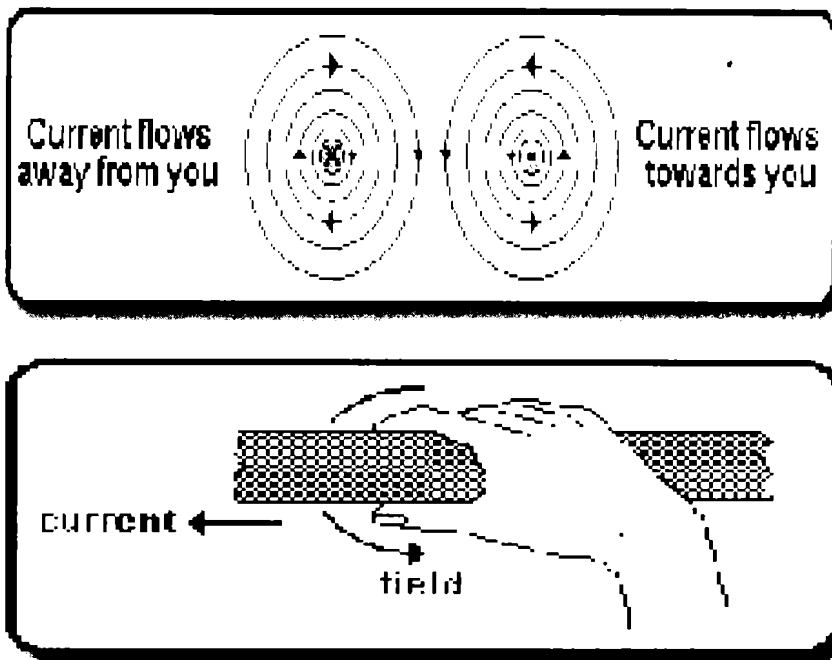
scribed “as the *opposition* to the flow of an alternating electric current through a conductor. However, impedance is a broader concept that includes the *phase shift* between the voltage and the current.”(Ivorra, 2002)

Inductance involves the expansion or contraction of a magnetic field. This varies as the current varies and causes an electromotive force of self-induction, which opposes any further change in the current. Coils have greater inductance than straight conductors so in electronic terms coils are called *inductors*. When a conductor is coiled (as with a Tesla coil or DNA helix), the magnetic field produced by current flow expands across adjacent coil turns. When a current changes, the induced magnetic field that is created also changes and creates a force called the *counter emf*. This opposes additional changes in the current.

This effect does not occur in static conditions in DC circuits when the current is steady. The *counter emf* effect only arises in a DC circuit when the current experiences a change in value. When current flow in a DC circuit rapidly falls, the magnetic field also rapidly collapses and has the capability of generating a high induced emf that at times can be many times the original source voltage. Higher induced voltages may be created in an inductive circuit by increasing the speed of current changes and increasing the number of coils.

In alternating current (AC) circuits the current is continuously changing so that the induced emf will affect current flow at all times.

DNA activities are intimately connected to these seemingly off topic electrical functions. DNA and a number of membrane proteins consist of helical coils which may allow them to electronically function as inductor coils. Also some research indicates that biological tissues may possess superconducting properties. If certain membrane proteins and your DNA actually function as electrical inductors, they may enable your cell to transiently produce very high electrical voltages.

Fig. 5.3. Electrical Currents and Fields

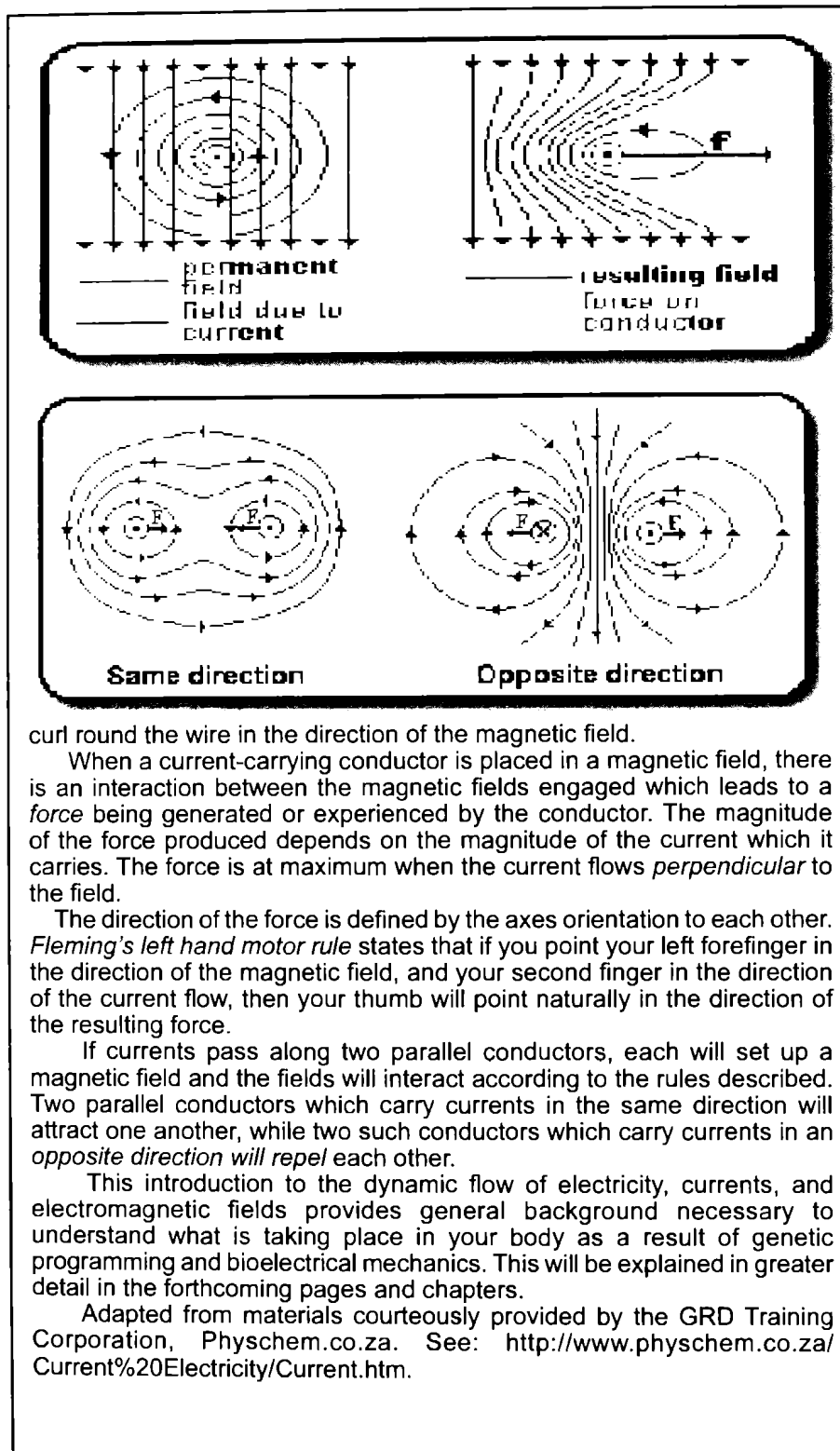
Diagrams depict *electrical currents* and *electromagnetic fields* associated with wire *conductors*. Current is the flow of charge, measured by the rate at which positive charge passes through any specified cross-sectional area. Current is also a scalar quantity denoted by the symbol "I." A *conventional current* flows from a positive terminal to a negative terminal (in the same direction as the field). In metals, the current comprises *electrons* which move in the field in the direction opposite to the conventional current.

In solutions, the current comprises *cations* (positive ions) flowing in the direction of the field and *anions* (negative ions) flowing in the opposite direction. Gases at low pressures can also conduct an electric current comprising both ions and electrons.

A direct current is one set up in response to a constant field. This is produced by all electrochemical cells.

If a field crosses a conductor it changes in a periodic fashion. Then an *alternating current* is set up in which the electrons accelerate first in one direction then slow down, stop and then accelerate in the other direction, slow down and stop and then repeat this cycle:

Magnetic fields are produced when a current flows through a conductor. These fields are represented by lines of flux which are closer together in regions of higher field. A small permanent magnet suspended in the field would align tangentially to the flux lines at any point. (The arrows which are shown in the diagrams of the flux lines indicate the direction in which the north-seeking pole of such a magnet would point, i.e. from N to S). If you grasp a long current-carrying wire with your right hand, holding your thumb extended in the direction of the current, then your fingers would



curl round the wire in the direction of the magnetic field.

When a current-carrying conductor is placed in a magnetic field, there is an interaction between the magnetic fields engaged which leads to a *force* being generated or experienced by the conductor. The magnitude of the force produced depends on the magnitude of the current which it carries. The force is at maximum when the current flows *perpendicular* to the field.

The direction of the force is defined by the axes orientation to each other. *Fleming's left hand motor rule* states that if you point your left forefinger in the direction of the magnetic field, and your second finger in the direction of the current flow, then your thumb will point naturally in the direction of the resulting force.

If currents pass along two parallel conductors, each will set up a magnetic field and the fields will interact according to the rules described. Two parallel conductors which carry currents in the same direction will attract one another, while two such conductors which carry currents in an *opposite direction* will *repel* each other.

This introduction to the dynamic flow of electricity, currents, and electromagnetic fields provides general background necessary to understand what is taking place in your body as a result of genetic programming and bioelectrical mechanics. This will be explained in greater detail in the forthcoming pages and chapters.

Adapted from materials courteously provided by the GRD Training Corporation, Physchem.co.za. See: <http://www.physchem.co.za/Current%20Electricity/Current.htm>.

Capacitance is the ability to accumulate and store charge from a circuit and later give it back to a circuit. In DC circuits, capacitance opposes any change in circuit voltage. In a simple DC circuit, current flow stops when a capacitor becomes charged. In biological systems, capacitance is defined by the measure of the quantity of charge that has to be moved across the membrane to produce a unit change in membrane potential.

Functioning in this regard are *capacitors*. In electrical equipment, these are composed of two plates of conducting metals that sandwich an insulating material. Energy is taken from a circuit to supply and store charge on the plates. Energy is returned to the circuit when the charge is removed. The area of the plates, the amount of plate separation, and the type of dielectric material used all affect the capacitance.

Dielectric characteristics occur in some materials that include both conductive and capacitive properties.(Reilly, 1998) In cells, the cell membrane is a leaky dielectric. *This means that any condition, illness, or change in dietary intake that affects the composition of the cell membranes and their associated minerals can affect and alter cellular capacitance.*

Inductors in electronic equipment exist in series and in parallel with other inductors as well as with *resistors* and *capacitors*. *Resistors* slow down the rate of conductance by brute force. Inductors impede the flow of electrical charges by temporarily *storing energy as a magnetic field* that gives back the energy later. Capacitors impede the flow of electric current by *storing the energy as an electric field*. Capacitance becomes an important electrical property in AC circuits and pulsating DC circuits. The tissues of the body contain pulsating DC circuits and AC electric fields.(Becker and Selden, 1985; Liboff, 1997)

Hydrogen Bonds and Energy Transfer

DNA gains much of its power from pyramids of nano-structured water molecules—the liquid from which all life was formed

according to the Book of Genesis. For this important reason, this section provides required technicalities for more in-depth understanding of DNA's electrical properties.

In the 1930s Nobel Laureate Linus Pauling argued that the weak “hydrogen” bonds in water partially get their identity from stronger “covalent” bonds in the H_2O molecule. As Pauling correctly surmised, this property is a manifestation of the fact that electrons in water obey the bizarre laws of quantum mechanics—the modern theory of matter and energy at the atomic level. Performed by researchers at Bell LabsLucent Technologies in the US, the European Synchrotron Radiation Facility in France, and the National Research Council of Canada, one experiment provided important new details on water's microscopic properties, which surprisingly remain largely hidden and difficult to measure. These new details allow researchers to improve predictions involving water and hydrogen bonds, and also integrate seemingly diverse areas such as nanotechnology and superconductors.

As reported by The National Institute of Physics, “One of the most important components of life as we know it is the hydrogen bond. . . . In water, there are two types of bonds. Hydrogen bonds are the bonds between water molecules, while the much stronger “sigma” bonds are the bonds within a single water molecule. Sigma bonds are strongly “covalent,” meaning that a pair of electrons is shared between atoms. Covalent bonds can only be described by quantum mechanics. In a covalent bond, each electron does not really belong to a single atom—it belongs to both simultaneously, and helps to fill each atom's outer “valence” shell, a situation which makes the bond very stable.

“Hydrogen bonds are *electrostatic* by nature. The much weaker hydrogen bonds that exist between H_2O molecules are principally the electrical attractions between a positively charged hydrogen atom which readily gives up its electron in water and a negatively charged oxygen atom—which receives these elec-

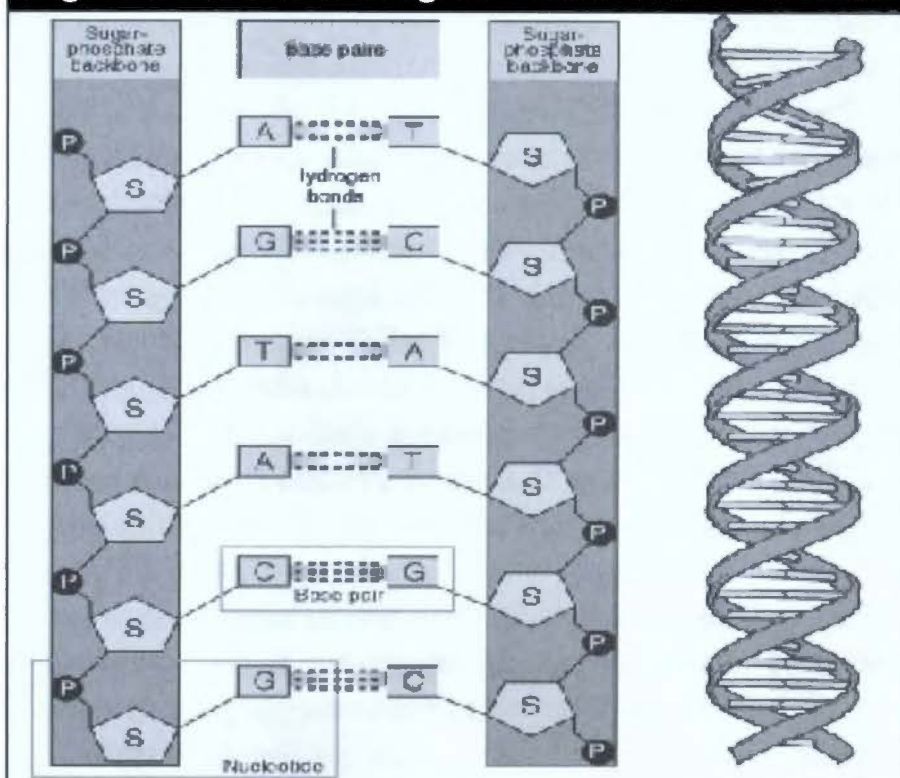
Fig. 5.4. DNA: Energetic Coil with H-Bonds

Diagram of DNA shows *hydrogen bonding* creating the "Sacred Spiral" by joining base pairs of connected sugar-phosphate strings. The coil structure best facilitates energy amplification and electromagnetic force transfer. Hydrogen bonds have been thought of as "chemical bonds" that exist between H_2O molecules and keep them together. But recent experiments have changed this view dramatically. X-rays of one color were shined on an ice crystal and the color and direction of the x-rays that emerged from the ice were analyzed. The results confirmed a controversial prediction first made by Nobel Prize winner Linus Pauling. The weak "hydrogen bonds" in water molecules get much of their identity from stronger "covalent" energy bonds within H_2O . The American Institute of Physics reported, "Because hydrogen bonds play a significant role in determining water's properties, such as its unusual ability to shrink when heated, this experiment is likely to shed light on the numerous mysteries associated with water, which brought about many of the conditions favorable for life on this planet. The information from this experiment may help improve the understanding of biological structures that contain hydrogen bonds, *such as DNA*. It may enable researchers to . . . learn new things about certain non-hydrogen-bond-containing materials, such as superconductors.

Graphics courtesy of The National Health Museum, The National Human Genome Research Institute (NHGRI), and artist Darryl Leja, and the text was adapted from "The Secret Nature of Hydrogen Bonds" in Physics News Preview, The National Institute of Physics, on the Internet at: <http://www.aip.org/physnews/preview/1999/h-bond/h-bond.htm>

trons—in a neighboring molecule. These “electrostatic interactions” can be explained perfectly by classical, pre-20th century physics. Specifically by Coulomb’s law, named after the French engineer Charles Coulomb, who formulated the law in the 18th century to describe the attraction and repulsion between charged particles separated from each other by a distance. . . .

“How do hydrogen bonds obtain their double identity? The answer lies with the electrons in the hydrogen bonds. *Electrons, like all other objects in nature, naturally seek their lowest-energy state. To do this, they minimize their total energy, which includes their energy of motion (i.e., kinetic energy). Lowering an electron’s kinetic energy means reducing its velocity. A reduced velocity also means a reduced momentum. And whenever an object reduces its momentum, it must spread out in space, according to a quantum mechanical phenomenon known as the Heisenberg Uncertainty Principle. In fact, this “delocalization” effect occurs for electrons in many other situations, not just in hydrogen bonds. Delocalization plays an important role in determining the behavior of superconductors and other electrically conducting materials at sufficiently low temperatures.*[Emphasis added.]

“Implicit in this quantum mechanical picture is that all objects—even the most solid particles—can act like rippling waves under the right circumstances. These circumstances exist in the water molecule, and the electron waves on the sigma and hydrogen bonding sites overlap somewhat. Therefore, these electrons become somewhat indistinguishable and the hydrogen bonds cannot be completely described as electrostatic bonds. Instead, they take on some of the properties of the highly covalent sigma bonds—and vice versa. However, the extent to which hydrogen bonds were being affected by the sigma bonds has remained controversial and has never been directly tested by experiment—until now.

“Working at the European Synchrotron Radiation Facility (ESRF) in Grenoble, France, a US-France-Canada research team designed an experiment that would settle this issue once and for all. Taking advantage of the ultra-intense x-rays that could be produced at the facility, they studied the “Compton scattering” that occurred when the x-ray photons ricocheted from ordinary ice. [Authors’ note: This new experiment provided unambiguous evidence.]

“Named after physicist Arthur Holly Compton, who won the Nobel Prize in 1927 for its discovery, Compton scattering occurs when a photon (i.e., tiny burst of light energy) impinges upon a material containing electrons. The photon transfers some of its kinetic energy to the electrons, and emerges from the material with a different direction and lower energy.

“By measuring the energy lost by a photon and its direction as it scatters from a solid, one can determine the momentum it transfers to the electrons in a molecule—and learn about the original momentum state of the electron itself. From this information, one can reconstruct the electron’s ground-state wave function—the complete quantum-mechanical description of an electron in a hydrogen bond in its lowest-energy state.

“The effect that the experimenters were looking for—the overlapping of the electron waves in the sigma and hydrogen bonding sites—was a very subtle one to detect. . . . The researchers decided to study solid ice, in which the hydrogen bonds are pointing in only four different directions because the H₂O molecules are frozen in a regularly repeating pattern. Still, the effect was expected to be fairly small—only a tenth of all the electrons in ice are associated with the hydrogen bond or sigma bond. . . . What also complicates matters is that Compton scattering records information on the contributions from all the electrons in ice, not just the ones in which the researchers were interested.

“[The results of the experiment showed wavelike energies flowed] between electrons in water. Taking the differences in

scattering intensity into account, and plotting the intensity of the scattered x-rays against their momentum, the team recorded wavelike fringes corresponding to interference between the electrons on neighboring sigma and hydrogen bonding sites. The presence of these fringes demonstrates that electrons in the hydrogen bond are quantum mechanically shared—covalent—just as Linus Pauling had predicted. . . .

“[The implications of this experiment are fascinating.] For many years, many scientists dismissed the possibility that hydrogen bonds in water had significant covalent properties. This fact can no longer be dismissed. The experiment provides highly coveted details on water’s microscopic properties. Not only will it allow researchers in many areas to improve theories of water and the many biological structures such as DNA which possess hydrogen bonds, improved information on the h-bond may also help us to assume better control of our material world. For example, it may allow *nanotechnologists to design more advanced self-assembling materials, many of which rely heavily on hydrogen bonds to put themselves together properly*. [Authors’ note: This sentence is emphasized because of the reference to self-assembly mechanisms in nanotechnology-related circuits and systems including DNA. This vitally important subject is covered in chapter 12 in relation to electrogenetics and bioholography.] Meanwhile, researchers are hoping to apply their experimental technique to study numerous hydrogen-bond-free materials, such as superconductors and switchable metal-insulator devices, in which one can control the amount of quantum overlap between electrons in neighboring atomic sites.”(Isaacs and Skukla, et. al, 1999)[Emphasis added.]

Oxidation/Reduction Reactions and DNA

Oxidation/reduction reactions are fundamental considerations in the realm of bioenergetic systems. Did you know that even drugs depend on the motion of energy-carrying electrons to

impart their pharmacological influences? This section addresses this important subject as it relates to DNA.

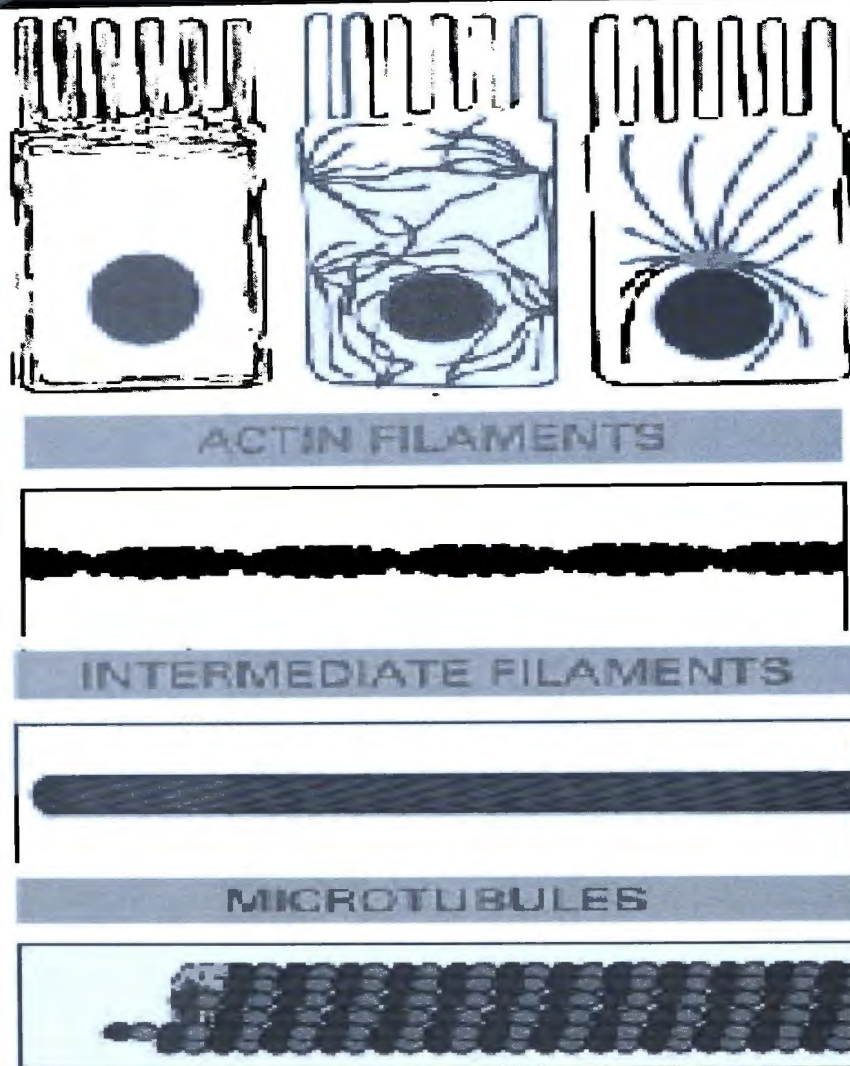
According to widely renowned cancer investigator Dr. Merrill Garnett, molecules hold and store electrical current at particular voltages. "Or there may be a smooth rise in the current being held until it reaches a certain voltage point and then the current will descend. These are what we refer to as the voltage peaks. This has to do with the atomic configuration and the electrons that are added in particular ranges and the characteristics of that molecule."(Garnett, 2001)

Helping to explain this electrical phenomenon as it involves oxidation and reduction, along with the role played by DNA in these energetic processes, Dr. Garnett relayed this experiment and explanation in describing his quest for a cancer cure:

Let's say you scan from zero to minus one volt. Voltage has a convention that's different than current. The signs are reversed. So increasing the number of electrons in voltage is what we call reducing. It has more negative potential. So you scan toward more negative potential, toward more *reducing force* in which the instrument *loads the molecule with electrical current*. And after the instrument gets to minus a volt and you start decreasing the voltage, so you're now *oxidizing, or pulling electrons back*. . . . You also have a reverse, or anodic peak, an upside down hill. *These wave forms are the molecule's electronic signature.*

If you take the average point between those two peaks, which is called a standard potential, it represents the behavior of that atom under those parameters: the scan speed, the drop size of the electrode, the particular electrolyte at a particular pH. You set up a standard system so you can look at a molecule in a particular way, electronically, which is representative of its electrical behavior; its reduction and oxidation in that particular voltage range. So now you can add another substance to it, one that doesn't read in that range. Let's say we add DNA, which doesn't read in the minus voltage range, so that any electrical influence on that substance will be read purely by the change in the molecular signature.

Fig. 5.5. Cytoskeletal Protein Structures for Energy Conduction and Nutrient Transfer



Three types of cytoskeleton protein structures built from DNA-bioenergetic orchestration are diagramed above. Notice all are coiled for increased electrical conductivity. From left to right and top to bottom: 1) *actin filaments*, also known as *microfilaments*, are most concentrated in the cell cortex just beneath the plasma membrane. Their diameter is about 7nm, and like DNA, they are helically designed to facilitate electrical current conduction and electromagnetic field generation. They appear as flexible structures organized into a variety of linear bundles, two-dimensional networks, and three-dimensional gels that energetically and structurally communicate with the liquid protein crystalline nature of the cell's cytoplasm; 2) *Intermediate filaments* also spiral in a (10nm diameter) rope-like manner within the cytoplasm from one cell junction to another; and 3) *Microtubules* are long, hollow cylinders made of protein tubulin 25nm in diameter. These connect to a single microtubule organizing center called a centrosome, and likely conduct electrical current internally. These structures provide far more than structural support for cells—they help direct energy currents according to most recent, generally neglected, research. Micrographs courtesy of Roger Craig, Richard Wade and Roy Quinlan, respectively, and The National Health Museum, <http://www.accessexcellence.org/AB/GG/cytoSkeleton.html>

If the additional substance changes the electrical character in a range in which that substance doesn't read, you set about deciding how the new substance did that. In what direction it changed its electrical character. Did it add electrons to it or did it take them away. If the reduction hill shrinks, you've lost electrical charge. The area under the reducing curve encloses a space, an integral, which describes the capacitance of the molecule. As that capacitance drops, that charge is lost to the material you've added. *So now you see that the charge has gone from the drug being studied to the DNA. That means that the drug has been oxidized or has lost charge, and the DNA has been reduced or has gained charge.*

The rate at which the hill disappears is of great importance. For example, if we run a scan over and over, the number of scans it takes for the reducing hill to disappear is the interval necessary to get rid of the charge. So if it happens right away you have a rapid effective reaction. . . . *So the more rapidly and efficiently one could transfer electron charge to DNA, the more effective was the potency against cancer in the [drug] screen[ing].* The major event occurred on the electrochemistry instrument. I got a beautiful tracing, because when I challenged DNA in 15 cyclic passes most of the signal disappeared and transferred to the DNA. *That was the most important signal I ever observed. . . .*"[Emphasis added](Garnett, 2001)

Chromosomes and Nucleosomes: Helical Energy Coils

Additionally, Dr. Garnett explained DNA's electrodynamics this way:

In the Chromosome, structures called *Nucleosomes*, which are DNA coiled around histone proteins, exist by the billions. They are found all through the Chromosomes. This is exciting because the Nucleosome is characteristically a stabilizing presence. As a coil, it has electronic inductance, and since we have a series of coils, we have a series inductance circuit. DNA current passes initially through the helix in a state where it can discharge its field energy. Hence, we have a pulse within the DNA interacting with other biomolecules like the membrane. The pulse can go in and come out, and the DNA is not imperiled. This proves an interesting model for the biological pulse.(Garnett, 2000)

Electrical and Electromagnetic Properties of Cells

If the preceding information has yet to convince you that everything in life operates energetically, the following technical information may compel you to appreciate the electrical and electromagnetic field (EMF) dynamics associated with the genetic regulation of biological systems. If you are an intelligent lay reader, you are encouraged to join the more technically minded in integrating this little-known information as it pertains to the central mission of this book. That is, to generate greater public appreciation for the full spiritual (i.e., electromagnetic and bioacoustic) domains of DNA operations, including the many electrical mechanisms involved in genetic control of life, yours included.

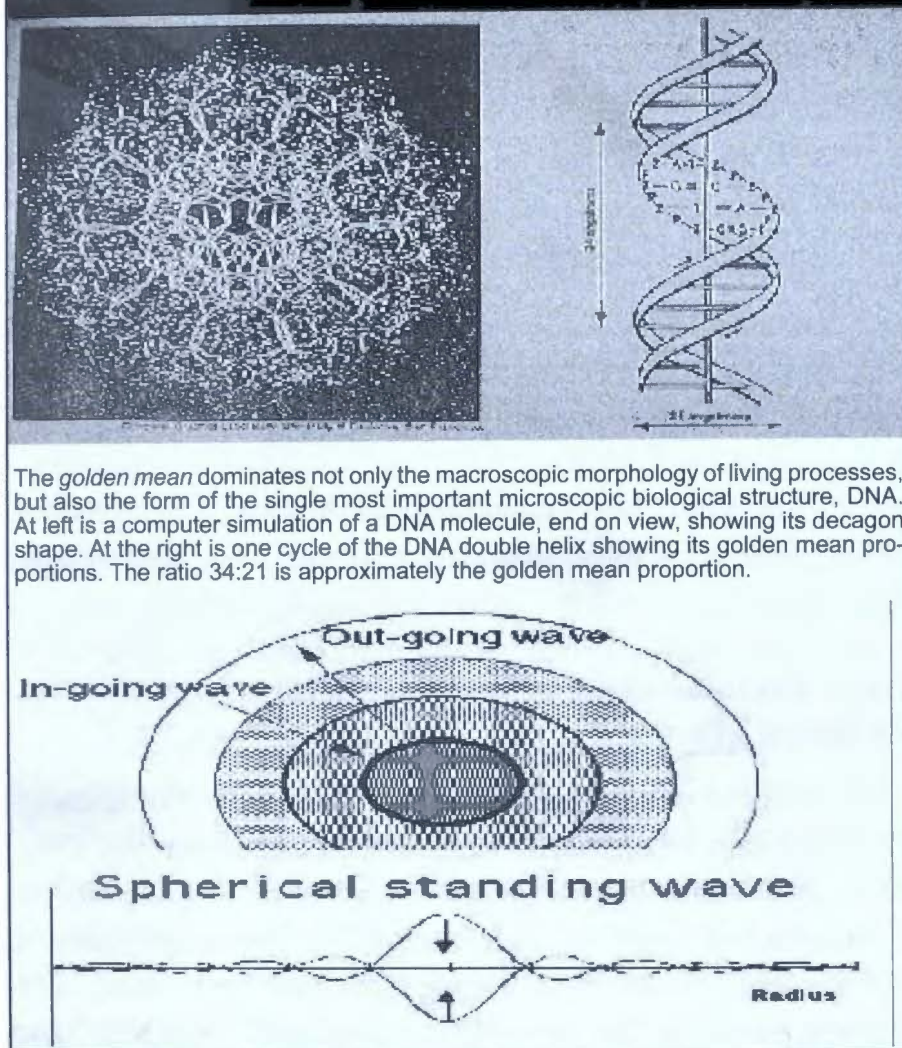
Topics introduced in the following pages include: 1) electroenergy dependent cell membrane receptors for hormones, growth factors, cytokines, and neurotransmitters. These can lead to alteration/initiation of membrane regulation of intra and intercellular processes; 2) electrochemically-induced alteration of mineral entry through the cell membranes; 3) activation or inhibition of cytoplasmic enzyme reactions; 4) increasing the electrical potential and capacitance of cell membranes; 5) changes in dipole orientation; 6) activation of the DNA helix leading to increased reading and transcription of codons and increased protein synthesis; and 7) activation of DNA and cell membrane receptors that act like *antennas* for certain windows of frequency and amplitude leading to the concepts of electromagnetic reception, transduction, and attunement.

As we have mentioned, there are multiple structures in cells that act as electronic components. If biological tissues and cellular and extracellular components can *receive*, *transduce*, and *transmit* electric, acoustic, magnetic, mechanical, and thermal

Table 5.1. Biological Phenomena Associated with Electromagnetic and Bioacoustic Mechanisms

1. Biological reactions to atmospheric electromagnetic and ionic disturbance (sunspots, thunder storms, and earthquakes).
2. Biological reactions to the earth's geomagnetic and Schumann fields.
3. Biological reactions to hands-on healing.
4. Biological responses to machines that produce electric, magnetic, photonic and acoustical vibrations (i.e., frequency generators).
5. Medical devices that detect, analyze and alter biological electromagnetic fields (i.e., biofields).
6. Efficacy of techniques such as acupuncture, moxibustion, and laser (photonic) acupuncture can result in healing effects and movement of "Chi" (i.e., life force).
7. Possibly how body work such as deep tissue massage, rolfing, physical therapy, and chiropractic can promote healing.
8. Holographic communication.
9. How neural therapy works.
10. How electrodermal screening works.
11. How some individuals have the capability of feeling, interpreting, and correcting alterations in another individual's biofield.
12. How weak EMFs have biological importance.

Fig. 5.6. Cell Organization by Wave Energy and EMF Interaction at the Molecular Level



The *golden mean* dominates not only the macroscopic morphology of living processes, but also the form of the single most important microscopic biological structure, DNA. At left is a computer simulation of a DNA molecule, end on view, showing its decagon shape. At the right is one cycle of the DNA double helix showing its golden mean proportions. The ratio 34:21 is approximately the golden mean proportion.

vibrations then this may help explain the phenomena listed in Table 5.1.

A fundamental property of all matter is that it vibrates with each atom and molecule vibrating at a characteristic frequency. All of the molecules of your body and their chemical bonds are constantly vibrating at a specific rate, which endows these components with the ability to both emit and absorb through *resonance* electromagnetic and sound energy.

These vibrations also manifest structurally. That is, your frequency vibrations heavily influence your material structure. The Sacred Spiral structure of DNA in this regard, associated with the Golden Mean as shown in figure 5.6, may be likened to a standing energy wave.

According to quantum theory, an entity, whether it is an atom or a molecule, simultaneously possesses both localized (particle) and distributed (wave) properties.

When two waves come together they interact with each other producing an interference pattern, a pattern capable of holding information as shown in figure 5.6. Information is processed and cell structures are organized by these forces including the structure and standing waves created by DNA, as well as the energy fields produced by resonating protein filaments and microtubules in cytoplasm.

Weak Electromagnetic fields (EMFs) with Strong Biological Effects

In order to understand how weak EMFs have biological effects, it is important to understand certain basic concepts. These have been minimally recognized because of certain scientific assumptions that have proven shortsighted, or downright wrong, in recent years. Many of these assumptions have been based on the *thermal paradigm* and the *ionizing paradigm*. These paradigms are based on beliefs that an EMF's effect on biological tissue is primarily thermal or ionizing. There is much more involved than this.

Electric fields need to be measured not just as strong or weak, but also as low carriers or high carriers of information. This is because electric fields, conventionally defined as thermally strong, may be low in biological information content. Alternatively, electric fields conventionally considered as thermally weak or nonionizing may be high in biological information if the proper

receiving equipment exists in biological tissues.

Weak electromagnetic fields are: bioenergetic, bioinformational, nonionizing, non-thermal, and are now known to produce measurable biological effects. Contrary to official pronouncements, such as those made by energy industrialists and government oversight agencies that fall largely under economic and political controls, weak electromagnetic fields have effects on organisms, tissues, and cells. These effects can be *highly frequency specific*. This makes sense if you consider biological systems are based on laws of mathematics and physics wherein certain frequency, harmonics, and resonance rules are established. This mathematical or numerological influence over life, if you will, also explains the *nonlinear dose response* curve demonstrated in biological systems following exposure to various EMFs and energy frequencies. Because the effects of weak electromagnetic fields are nonlinear, fields in the proper frequency and amplitude windows may produce large effects, which may be beneficial or harmful.

This frequency dependent dynamic of life includes “the powers of the 3s, 6s and 9s,” described by Nicola Tesla and John Keely while referring to the metaphysical and biological influence of Pythagorean mathematics.(Horowitz and Puleo, 1999) Those precise Hertz frequencies exposures that resolve into these single digit integers (i.e., 3, 6, or 9, including time exposure measures) may be strong cofactors in determining physical outcomes.

Homeopathy, and the success of homeopathic medicines, is another example of using weak fields with beneficial electromagnetic effects.

Other examples of thermally weak, but high informational content fields of the right frequency range are *visible light* and the *healing touch*. The former is used to cure neonatal jaundice. The latter has been successfully used since biblical times to heal all sorts of injuries and pathologies.

As you will learn more in the pages ahead, biological tissues have electronic components that can receive, transduce, and transmit weak electronic signals. Organisms use these weak electromagnetic fields, bioelectric currents, and photonic energies to synchronize biological operations and communicate virtually instantaneously with all parts of themselves.

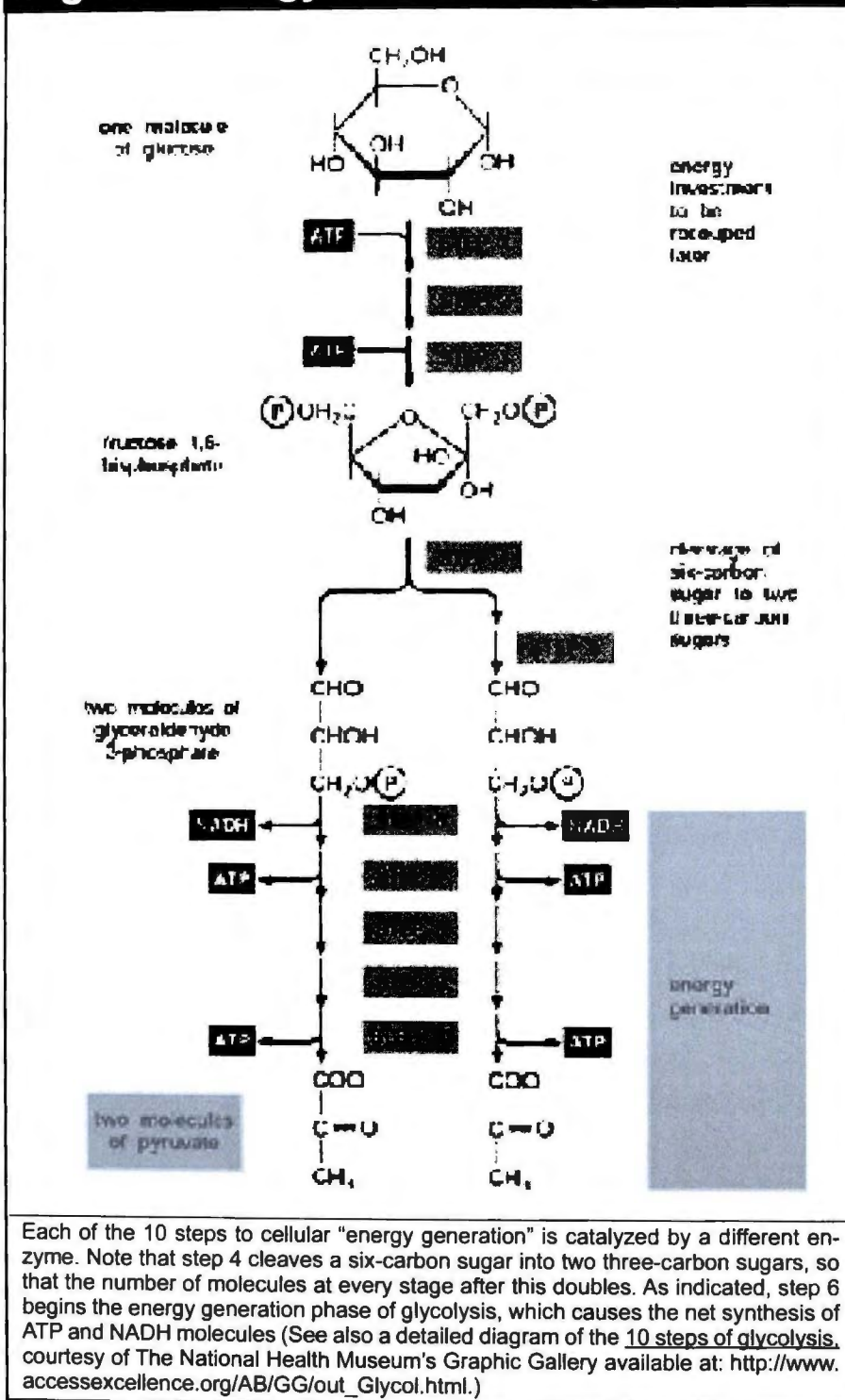
Other related bioenergetic errata includes the fact that electric fields can relay information through frequency and amplitude fluctuations; that biological organisms demonstrate characteristics of energetic holograms; that healthy organisms have coherent biofields and sick organisms have field disruptions and chaotic signals or signal interruptions; and that measures to correct field disruptions and improve field integration such as acupuncture, neural therapy, and resonant repatterning therapies have been shown to promote health.

The Electrical Roles of Membranes and Mitochondria

Electricity in your body comes from the food that you eat and the air you breathe.(Brown, 1999) Cells derive their energy from enzyme-catalyzed chemical reactions which involve the oxidation of fats, proteins, and carbohydrates. Cells can produce energy by oxygen-dependent aerobic enzyme pathways and by less efficient fermentation pathways.(Haltiwanger, 2002)

The specialized proteins and enzymes involved in oxidative phosphorylation are located on the inner mitochondrial membrane and form a molecular respiratory chain or wire. This molecular wire (electron transport chain) passes electrons donated by several important electron donors through a series of intermediate compounds to molecular oxygen, which becomes reduced to water. In the process, lower energy ADP is converted into higher energy ATP.

When the electron donors of the respiratory chain NADH and FADH₂ release their electrons, hydrogen ions are also released.

Fig. 5.7. Energy Production by Glycolysis

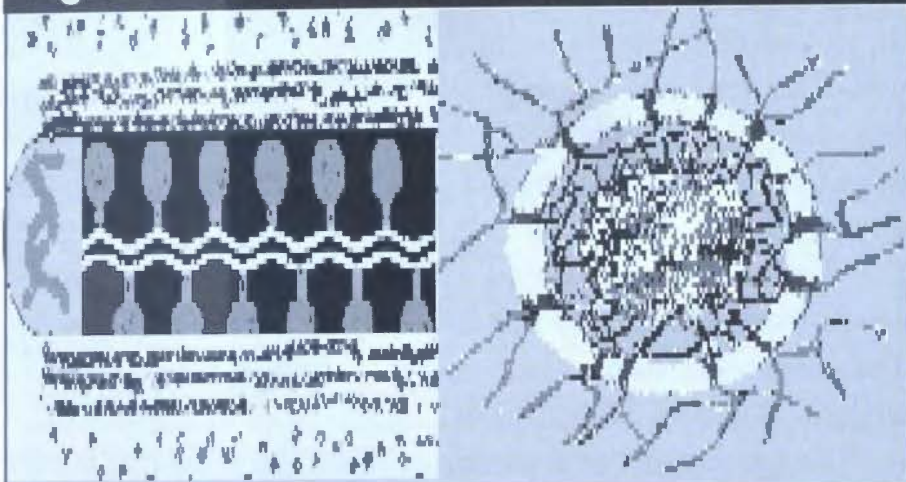
These positively charged hydrogen ions are pumped out of the mitochondrial matrix across the inner *mitochondrial membrane* creating an electrochemical gradient. At the last stage of the respiratory chain these hydrogen ions are allowed to flow back across the inner mitochondrial membrane and they drive a molecular motor called ATP synthase in the creation of ATP, much like water drives a water wheel. (Stipanuk, 2000; See figure 5.7.) *This normal energy production process utilizing electron transport and hydrogen ion gradients across the mitochondrial membrane is disrupted in various illnesses, and especially when cells become cancerous.* (Haltiwanger, 2002)

Enzymes: Electrical Switches for DNA

At this juncture, we will define the important role of enzymes more clearly. Enzymes are catalytic molecules that start and stop metabolic reactions occurring within cells. For this reason they are central to cellular energy and electrical processes.

Typically, proteins and metallo-organic molecules exert enzymatic effects. Their special importance was beautifully described by Dr. Merrill Garnett a cancer researcher who labored to discover “mystery” enzymes associated with regulating the expression of DNA and its specific genes. He became particularly interested in identifying enzymes responsible for triggering healthy aerobic cell development.

According to Dr. Garnett, “As you grow older, you become a different creature. We can only study the individual reactions which are definable and clear, but in the cell we have a concert being played. It has a prelude in the baby and the small child, then an overture in the adolescent, then the recurring themes of the mature adult and finally the old all because of the mystery developmental enzymes. Now I’m not saying that the enzymes are producing anything different as time passes, but that enzymes turn on and off. A new enzyme comes on the state. There are new players as the drama unfolds. It’s gene expression, and what we

Fig.5.8. Protein and Membrane Communication

Cells are more than bags of fluids with their enzymes floating around randomly. In fact, the enzymes of your cells are attached to an organized internal structure called “a cytoplasmic matrix” composed of liquid crystal (LC) tubes and filaments surrounded by organized layers of water (Oschman, 2000).

This arrangement permits electronic communication and solid-state biochemical reactions to proceed by facilitating the transfer of negative charges by electrons (-). These are conducted through semiconducting LC protein polymers. Positive charges can also jump between protons (H⁺) in the organized multilayers of water associated with protein surfaces. (Ho and Knight, 1998)

bring here to genetics is the suggestion that the developmental reactions rely heavily on energy.” Dr. Garnett christened the term *electrogenetics* to best describe this process. (Garnett, 1998; 2001)

“There are three types of enzymes and gene site reactions which allow the electrical polarization” of cells, according to Dr. Garnett. “These groups are called: 1. The oxygen vehicle system, which is the indirect effect of Carbonic anhydrase; 2. The electron transfer system which we call nucleotide reductases, and 3. Prolyl hydroxylase which allows the outward current. . . . [T]he nucleotide reductase exists to actually make DNA.” And following the production of DNA, this enzyme also serves in continuing to reduce (i.e., add electrons to) DNA for its electrical and

metabolic expression.(Garnett, 1998; 2001)

Carbonic anhydrase was thought, by Dr. Garnett and others, to be “the first developmental enzyme.” It lowers intracellular gaseous carbon dioxide and facilitates oxygen uptake by cells. “Oxygen of course is a great electron carrier. So one begins to talk about electron transfer and oxygen radicals shortly after we allow oxygen to come into the cell.

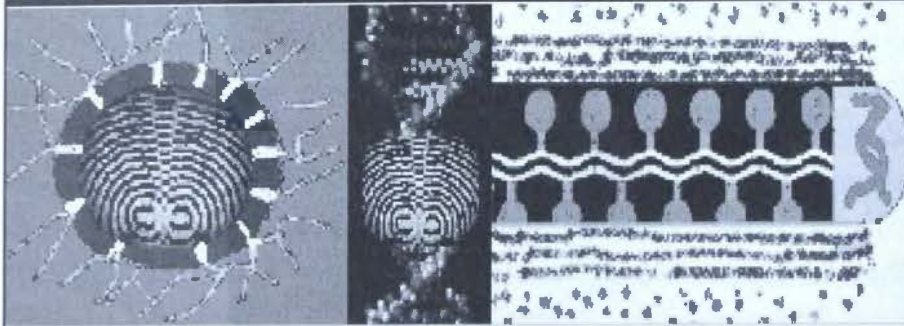
“The next stage, DNA reductase, is an electron transport reaction which is naturally influenced by the presence of oxygen. The availability of electrons to it is greater in the presence of oxygen.”(Garnett, 1998; 2001)

The connective tissue protein collagen is formed by the third developmental enzyme, prolyl hydroxylase. It forms collagen by putting a hydroxyl radical on to the pro collagen molecule. Thus, the “transfer of oxygen radical species to procollagen was a simple experimental model,” used by Dr. Garnett, “which bore out very well” in the science of electrochemistry.

Dr. Garnett summarized his important determinations thusly:

So we now had two parts of the inward current; the admission of oxygen and the transfer of electrons. And we had one part of the outward current; the transfer of hydroxyl. What we had was three reactions that describe development; admission of oxygen, the transfer of electrons, and the outward transfer of hydroxyls. They are all compatible and interrelated. You can't make a hydroxyl without oxygen or without electrons or their water products. So far these three are the lead developmental enzymes of electrogenetics.

During his enzyme experiments, Dr. Garnett and colleagues attempted to treat cancer cells based on simultaneously treating tumors with “opposite charges.” They realized that if you enzymatically “transfer electrons and protons at the same time,” (i.e., moving neutral hydrogen atoms) you can eliminate the fever response during chemotherapy.(Garnett, 1998; 2001)

Fig. 5.9. Protein and Membrane Oscillators

The cells of an organism are embedded in a matrix of organized water and most of the body's cells are hardwired into a holographic liquid crystal polymer continuum. That connects the *cytoskeletal elements* of the inside of your cells through cell membrane structures with a *semiconducting* and *photonic liquid crystal polymer* connective tissue communication system.

Modern electronic devices are now made of transistors, which are composed of *semiconductors*, *resistors*, *capacitors*, etc. The connections of these various sub-components allows electronic devices to process information.

The liquid crystal biological oscillators/molecules of your body also possess these electronic capabilities enabling them to absorb, resonate to, and emit electromagnetic energy.

Quantum Mechanics and Complex Electron Dynamics

The following summary of biophysics was published by Miller et. al., in 2002. Their exceptional work applying this knowledge to the field of electrogenetics and “bioholography” is detailed in the final chapter of this book. The information that follows is reprinted with the lead author’s permission:

“Particles found in biological processes include photons, electrons, protons, elementary ions, inorganic radicals, organic radicals, molecules, and molecular aggregates. . . .

“Photons act upon electrons by raising their energy state. This process is called *excitation*. Excited electrons can drop back to more stable energy levels and emit photons [of light energy]. Electron excitations can lead to the formation of electrical bonds between molecules. These represent the traditional bonds of classical chemistry. The breaking of such bonds can, by reverse process, lead to the excitation of electrons.

“In living systems the excitation of electrons by photons, and the subsequent conversion of that excitation into the bond

energy, is called *photosynthesis*. This is the basic builder of biological structures.

“The reversal of this process is called *bioluminescence*. During this process, energy is transferred from a molecular bond to an excited electron. This results in the emission of a light energy photon. In 1957, Szent-Gyorgyi suggested that the energetics of living creatures could be best understood in terms of photosynthesis and its reversal, bioluminescence.

“As mentioned previously, all cellular processes are driven by energy derived from the breaking of chemical bonds and the excitation of electrons. Depending upon the particular environment and circumstances, the excitation of electron energy can be converted in one of three ways: (1) conversion into heat and dissipation (2) translation of molecules or ions through the cell, or (3) transformation of the molecules’ geometric form which can, and most often does, profoundly influence biomolecular activity and/or reactivity.

“The formation of a certain type of chemical bond known as the *resonance bond* (most easily seen with the benzene molecule) leads to a peculiar situation in which certain electrons are freed from a local, or particular, location in the molecule. These are then free to travel around the entire molecule. This means that the electrons occupy an energy shell of the whole molecule as opposed to any particular atom in the molecule. The existence of molecular systems with mobile electrons has been found to be of *profound* significance in the manifestation, or precipitation, of life.” This will be discussed in great detail in Chapter 12 wherein consideration is given to works by the Russian investigator, Gariaev (1994; 1995), and a more recent publication by Miller, et. al., (2002).

“Hydrogen, carbon, nitrogen, and oxygen, which compose 99 percent of all living systems, are among the atoms in the periodic table which form the multiple bonds most easily leading to mobile electrons. Sulphur and phosphorus, which are extremely

important for life processes, also form such multiple bonds quite easily.

“All the essential biochemical substances, which perform the fundamental functions of living matter, are composed completely or partially of such mobile electrons. Molecules which contain these electrons are known as conjugated systems.(Pullman and Pullman, 1963). The essential fluidity of life may correspond with the fluidity of the electronic cloud in conjugated molecules. Such systems may best be considered as both the cradle and the main backbone of life.

“Conjugate bonded molecules may interact in a variety of ways. Among these types of interaction can be found the interpenetration of electron orbitals which permits an electromagnetic *coupling* between molecules. This coupling can permit activated electron energy to pass from one molecule to another in the same way a radio can transmit a message to a radio receiver. There is also the possibility of the transfer of an entire electron which is known as *charge transfer*.

“It is possible for a molecular complex to contain several electrically-charged radicals at different positions on the main molecule, each of which are conjugated. If these are in close enough proximity, or can be brought into proximity by changes in the structural configuration of the molecule, a charge can pass between these two groups. . . . It has been suggested by Szent-Gyorgyi (1968) that the sugars and phosphates that make up the side of the alpha helix of DNA can permit the passage of electrons. Thus, your human genome functions as a conductor of energy.

“Biological energy conduction systems operate primarily as amorphous *semiconductors* as opposed to resembling metallic conductors. These do not have sharply defined energy bands in which electrons may flow, as opposed to other bands in which they are bound rigidly.

influencing biomolecular activity, or reactivity, is the fusion of electron clouds within a conjugated system and among conjugated systems. These mechanisms can account for *cohesion*, which is the adherence of such molecules to each other for the governing of energy transfers or chemical operations. Such fusion, and related phenomena, greatly influences the structure of larger aggregates of molecules and portions of living cells, such as membranes.

Energized Structures Involved in Carcinogenesis

As mentioned previously, many mainstream cancer researchers believe that cancerous transformation arises due to changes in the genetic code. However, far more goes on during carcinogenesis than genetic abnormalities alone.

A series of papers written by Ilmensee, Mintz and Hoppe in the 1970-1980s showed that replacing the fertilized nucleus of a mouse ovum by the nucleus of a teratocarcinoma did not create a mouse with cancer. Instead the mice when born were cancer free.(Seeger and Wolz, 1990) These studies suggest the theory that abnormalities in other cell structures outside of the nucleus, such as the cell membrane and the mitochondria, and functional disturbances in cellular energy production and cell membrane potential, are also involved in cancerous transformation.

In examining data that support this theory, as far back as 1938, Dr. Paul Gerhardt Seeger originated the idea that destruction or inactivation of enzymes, like cytochrome oxidase in the respiratory chain of the mitochondria, was involved in the development of cancer. Seeger indicated in his publications that the initiation of malignant degeneration was due to alterations not to the nucleus, but to cytoplasmic organelles.(Seeger and Wolz, 1990)

Mitochondrial dysfunction and changes in cytochrome oxidase have also been reported by other cancer researchers to impact carcinogenesis.(Sharp et al., 1992; Modica-Napolitano et al., 2001)

DNA: Pirates of the Sacred Spiral

“According to McGinness (1972), there is a spread, or bell-curve, in which the points, or tails, are bound more closely to a particular molecule. The hump of the bell curve represents a conducting band that permits electrons to flow across the surface of a particular molecule or between molecules. This means, in essence, that protein molecules that are composed of amino acid sequences may act as *organic circuits*. The amino acids each have a donor group and an acceptor group on opposing ends. This means that a string or series of amino acids could pass a charge along as if it were being passed along a series of spines sticking up from the main body of the molecule.

“Different pathways could arise along the surface of a protein molecule by amino acid radicals projecting out from the surface of their protein. The shape of protein molecules is a function of the energetic state of the molecules. This is influenced bioacoustically and electromagnetically as will be discussed later. At this juncture, it is sufficient to know that charges, and the conjugate systems on the radicals that make up the protein, influence molecular shapes [and biological outcomes].

“When a protein is first manufactured, and then peels off from the ribosome, it immediately assumes a three-dimensional spatial pattern. This shape is directly related to the charges on its surface and the ways in which they interact.”(Miller, et. al., 2002)

To summarize basic biophysics, the biological activity or specificity of action of various molecules is intimately related to their structure or their exact three-dimensional spatial configuration. Electronic energy, and electrons, move through protein molecules, and between their different parts, and can pass among different molecules. We now understand that energetic mechanisms for biological regulation involve electron flows and electron transfers of electronic energy between molecules. These molecules change their shape, and thereby change their specific action and activity, based on their energy status. Additionally

Seeger's findings followed more than 50 years of cancer research. His teams concluded: 1) that *cells become more electronegative* in the course of cancerization; 2) that *membrane degeneration* occurs in the initial phase of carcinogenesis first in the external cell membrane and then in the inner mitochondrial membrane; 3) the degenerative changes in the surface membrane causes these *membranes to become more permeable to water-soluble substances*. Then potassium, magnesium, and calcium migrate from the cells and sodium and water accumulate in the cell interior; 4) the degenerative changes in the inner membrane of the mitochondria causes loss of anchorage of critical mitochondrial enzymes; and 5) the mitochondria in cancer cells degenerate and are reduced in number. (Seeger and Wolz, 1990; Haltiwanger, 2002)

Toxic Inhibition of Bioelectric Functions

Numerous toxins have been identified that are capable of causing cancerous transformation. Many of these toxins not only cause genetic abnormalities, but also affect the structures and electrical functions of the cell membrane and the mitochondria.

Toxic compounds that disrupt the electrical potential of cell membranes and the structure of mitochondrial membranes will deactivate the electron transport chain and disturb oxygen-dependent energy production. Cells will then revert to fermentation, which is a less efficient primeval form of energy production. According to Seeger and others, the conversion to glycolysis, secondary to the deactivation of the electron transport chain, has a profound effect on the proliferation of tumor cells. These researchers believe that *the virulence of cancer cells is inversely proportional to the activity of the respiratory chain*. Conversion to glycolysis as a primary mechanism for energy production results in excessive accumulation of organic acids and pH reductions almost universally demonstrated in cancerous tissues. (Seeger and Wolz, 1990; Haltiwanger, 2002)

The Body: Electric Vehicle of Consciousness

Among the electrical properties that cells demonstrate are the ability to conduct electricity, create electrical fields, and function as *electrical generators* and *batteries*. This sounds like a science fiction movie, but it is a scientifically-proven reality,

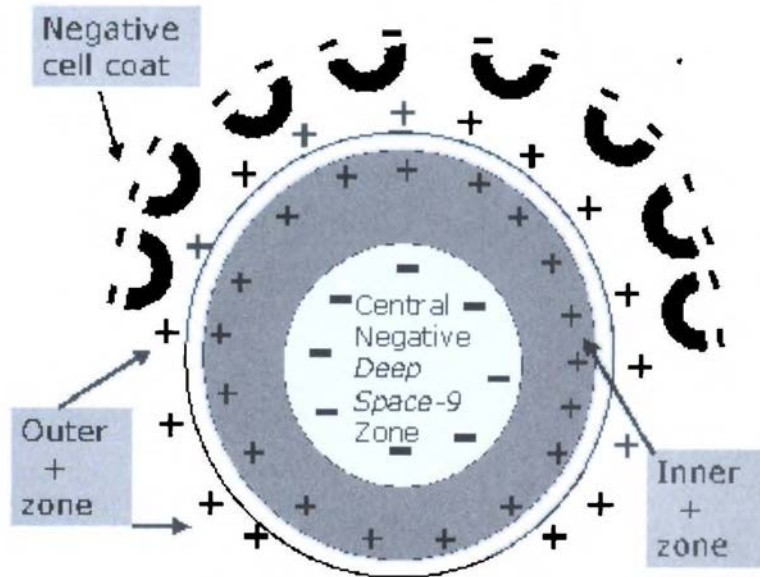
In electrical equipment the electrical charge carriers are electrons. In the body, electricity is carried by a number of mobile charge carriers as well as electrons. Although many supposed authorities argue that electricity in the body is only carried by charged ions, Robert O. Becker and others have shown that electron semi-conduction also takes place in biological polymers.(Becker and Selden, 1985; Becker, 1990)

The major charge carriers of biological organisms are negatively charged electrons, positively charged hydrogen protons, positively charged sodium, potassium, calcium and magnesium ions, and negatively charged anions particularly phosphate ions. The work of Mae Wan Ho and Fritz Popp proved that cells and tissues also conduct electricity, and are linked by electromagnetic phonons and photons.(Ho, 1996; Haltiwanger, 2002)

The body uses the exterior cell membrane, and positively charged mineral ions that are maintained in different concentrations on each side of the cell membrane, to create a *cell membrane potential* (i.e., a voltage difference across the membrane) and a strong electrical field around the cell membrane. As shown in figure 5.10, this electrical field is a readily available source of energy for a significant number of cellular activities including membrane transport and the generation of electrical impulses in the brain, nerves, heart, and muscles. (Brown, 1999)

The storage of electrical charge in the membrane and the generation of an electrical field create a battery function so that the liquid crystal semiconducting cytoskeletal proteins can in a sense plug into this field and power up cell structures such as genetic material. In other words, *within the cytoplasm of cells*

Fig. 5.10. Four Electrical Zones of Cells



A healthy cell contains four electrified zones. The *central zone* contains negatively charged organic molecules and maintains a steady bulk negativity. An *inner positive zone* exists between the inner aspect of the cell membrane and the central negative zone. This inner positive zone is composed of a thin layer of freely mobile cations particularly potassium and a small amount of calcium as well.

The *outer positive zone* exists around the outer surface of the cell membrane and consists of a denser zone of mobile cations composed mostly of sodium, calcium and a small amount of potassium. Because the concentration of positive charges is larger on the outer surface of the cell membrane than the concentration of positive charges on the inner surface of the cell membrane an electrical potential exists across the cell membrane.

How can the surface of cells be electrically negative if a shell of positively charged mineral ions surrounds the exterior surface of the cell membrane? Because of the existence of an outer electrically negative zone called the cell coat or glycocalyx.

The *outermost electrically negative zone* is composed of negatively charged sialic acid molecules that cap the tips of glycoproteins and glycolipids that extend outward from the cell membrane like tree branches.

The outermost surface zone of negativity makes each cell act as a *negatively charged body*; every cell creates a negatively charged field around itself that influences any other charged body close to it. It is the negatively charged sialic acid residues of the cell coat (glycocalyx) that helps give each cell its zeta potential.

Since the negatively charged electric field around cells are created by sialic acid residues, any factor that increases or decreases the number of sialic acid residues will change the degree of surface negativity a cell exhibits.

These electrostatics profoundly impact cell health, pathogenesis through microbial docking, and free-radical attack, as well as immuno-surveillance by electrically-sensitive macrophages. Courtesy of Dr. Steve Haltiwanger.

lies a protein crystal network or lattice-like electrical matrix through which electrical currents and electromagnetic fields are conducted and pass to affect the major structures and functions of all cells.

The voltage potential across cellular membranes create surprisingly powerful electric fields that approach 10,000,000 volts/meter according to Reilly and up to 20,000,000 volts/meter according to Brown.(Reilly, 1998; Brown, 1999)

Like cellular membranes, the body uses mitochondrial membranes and positively charged hydrogen ions to create strong membrane potentials. Hydrogen ions are maintained in a high concentration on the outside of the inner mitochondrial membrane by the action of the electron transport chain. This creates a mitochondrial membrane potential of about 40,000,000 volts/meter. When this proton electricity flows back across the inner mitochondrial membrane it is used to power a *molecular motor* called ATP synthase, which loads negatively charged phosphate anions onto ADP thus creating ATP.(Brown, 1999)

ADP, ATP and other molecules that are phosphate carriers are electrochemical molecules that exchange phosphate charges between other cellular molecules. According to Brown, “The flow of phosphate charge is not used to produce large-scale electrical gradients, as in conventional electricity, but rather more local electrical fields within molecules.”(Brown, 1999) The body uses phosphate electricity to activate and deactivate enzymes in the body by charge transfer, which causes these enzymes to switch back and forth between different conformational states. So in a sense *enzymes and other types of proteins such as cytoskeletal proteins may function as electrical switches.*

The *liquid crystal proteins that compose the cytoskeleton support, stabilize, and connect the liquid crystal components of the cell membrane with other cell organelles.* The cytoskeletal proteins have multiple roles:

These proteins composing the cytoskeleton serve as *mechanical scaffolds* that organize enzymes and water, and anchor the cell to structures in the extracellular matrix via linkages through the cell membrane. According to Wolfe, “cytoskeletal frameworks also reinforce the plasma membrane and fix the positions of junctions, receptors, and connections to the extracellular matrix.”(Wolfe, 1993)

Self-assembling cytoskeletal proteins are dynamic network structures that create a fully integrated electronic and probably *fiber-optic continuum* that links and integrates the proteins of the extracellular matrix with the cell organelle.(Haltiwanger, 1998; Oschman, 2000)

Cytoskeletal proteins also structurally and electronically link the cell membrane with cell organelles.

Ultimately, every part of your body is linked bioelectrically to every other body part, and to the ambient environment within which you exist.

Cytoskeletal Proteins are Altered in Cancer Cells

Given this more comprehensive understanding of electrical linkages throughout the body in health, consider what happens during disease. We will use cancer, once again, to illustrate.

Alterations in cancer cells include a *reversion to arrangements typical of embryonic cells*. Contacts and connections with the extracellular matrix (ECM) and neighboring cells break down in cancer cells. *The change of connections of the cytoskeletal proteins with ECM components, and the cell membrane, disrupts the flow of inward current into cancer cells, affects their genetic activity, and is an important factor in disabling oxygen-dependent energy production.*

Cells obtain energy from food either by fermentation or oxygen-mediated cellular respiration. Both methods start with the process of *glycolysis*, which is the splitting of glucose (6 carbon) into two molecules of pyruvate (3 carbon). Biologists recognize

that glycolysis, the oldest metabolic way to produce ATP energy, has been preserved as a backup system in all living organisms. Glycolysis happens in the cytoplasm and does not require oxygen in order to produce ATP, but it is also a much less efficient method than aerobic respiration.

The enzyme *pyruvate dehydrogenase* plays a pivotal role in determining whether energy is extracted from glucose by aerobic or anaerobic methods. *This enzyme exists in an altered form in cancer cells.* (Garnett, 1998)

Overall membrane changes, mitochondrial dysfunction, loss of normal cellular electronic connections, and enzyme changes are all factors that contribute to the permanent reliance of cancer cells on the ancient method of glycolysis for energy production.

The Electrical Charge at Cell Surfaces

All cells possess an electrical potential that exists across the cell membrane. This is commonly referred to as the *cell membrane potential*. Why is this the case?

Cell membranes are composed of a bilayer of highly mobile fat (i.e., lipid) molecules that electrically act as insulators (i.e., dielectrics; see figure 5.10.) The insulating properties of the cell membrane lipids also act to restrict the movement of charged ions and electrons across the membrane except through specialized membrane-spanning protein-ion-channels; (Aidley and Stanfield, 1996) Membrane-spanning protein semiconductors may also be active in this transmembrane flow of charged particles. (Oschman, 2000)

Since cell membranes are selectively permeable to sodium and potassium ions, a different concentration of these and other charged mineral ions build up on either side of the membranes. The different concentrations of these charged molecules cause the outer membrane surface to have a relatively higher positive charge than the inner membrane surface. This creates an electrical potential across the membrane. (Charman, 1996) All cells

have an imbalance in *electrical charges* between the inside of the cell and the outside of the cell. This difference, again, is known as the *cell membrane potential*.

Because this membrane potential is created by the difference in the concentration of ions inside and outside the cell, this creates an electrochemical force, or *gradient*, across the cell membrane. According to peer reviewed science, "Electrochemical forces across the membrane *regulate chemical exchange across the cell*." The *cell membrane potential helps control cell membrane permeability* to a variety of nutrients and helps turn on the machinery of the cell; particularly energy production, and the synthesis of macromolecules. (Reilly, 1998)

All healthy cells have a membrane potential of about -60 to -100mV. The negative sign of the membrane potential indicates that the inside surface of the cell membrane is relatively more negative than the immediate exterior surface of the cell membrane.(Cure, 1991) In living cells, the inside surfaces of cell membranes is slightly negative relative to its external cell membrane surface.(Reilly, 1998) If you consider the *trans-membrane potential* of healthy cells, *the electric field across human cell membranes at any given moment, as mentioned, is enormous!*(Brown, 1999; Reilly, 1998)

Healthy cells maintain, inside of themselves, a high concentration of potassium and a low concentration of sodium. But *when cells are injured, or cancerous, sodium and water flows into the cells and potassium, magnesium, calcium and zinc are lost from the cell interior. Then the cell membrane potential falls.*(Cone, 1970, 1975, 1985; Cope, 1978).

In originally writing on this subject for a monograph on cancer, Dr. Haltiwanger found that trying to describe which of the above changes came first, was much like arguing whether chickens preceded eggs. What is known is that carcinogenic cofactors include changes in: 1) cell membrane structure; 2) membrane function; 3) cell concentrations of minerals; 4) cell membrane potentials; 5) electrical connections within the cells and between

cells; and 6) changes in cellular energy production. For more insight into these changes, consider the next section's discussion on the electrodynamic zones of every cell.

Discrete Electrical Zones in Cells

Cell physiologist Robert Charman is exceptional in relaying understanding that the electrical properties of a cell vary by location.

According to Charman, *a cell contains four electrified zones.*(Charman, 1996) As shown in figure 5.10, the *central zone* contains negatively charged organic molecules and maintains a steady bulk negativity. An *inner positive zone* exists between the inner aspect of the cell membrane and the central negative zone. The inner positive zone is composed of a thin layer of freely mobile mineral cations particularly potassium and, according to Hans Nieper, a small amount of calcium as well.(Nieper, 1985) The *outer positive zone* exists around the outer surface of the cell membrane and consists of a denser zone of mobile cations composed mostly of sodium, calcium, and a small amount of potassium. Because the *concentration of positive charges is larger on the outer surface of the cell membrane than the concentration of positive charges on the inner surface of the cell membrane an electrical potential exists across the cell membrane.*

If you wonder how the surface of cells can be electrically negative if a shell of positively charged mineral ions surrounds the exterior surface of the cell membrane, the answer lies in the *glycocalyx* the existence of an outer electrically negative zone composed of the outermost cell coat.

This *outermost electrically negative zone is composed of negatively charged sialic acid molecules that cap the tips of glycoproteins and glycolipids that extend outward from the cell membrane like tree branches.* The outermost negative zone is separated from the positive cell membrane surface by a distance

of about 20 micrometers. According to Charman, "It is this outermost calyx zone of steady negativity that makes each cell act as a negatively charged body; every cell creates a negatively charged field around itself that influences any other charged body close to it."(Charman, 1996)

As stated in figure 5.10, it is the negatively charged sialic acid residues of the cell coat (glycocalyx) that gives each cell its *zeta potential*. Since the negatively charged electric field around cells are created by sialic acid residues, any factor that increases or decreases the number of sialic acid residues will change the degree of surface negativity a cell exhibits. Later in this chapter we will discuss how cancer cells have significantly more sialic acid molecules in their cell coat and, as a result, cancer cells have a greater surface negativity.

In advancing a clinical discussion on this subject, Dr. Haltiwanger cited *one possible reason that enzyme therapy is beneficial in cancer*. He believes *certain enzymes can remove sialic acid residues from cancer cells reducing their surface negativity*.

Bioelectric Changes in Cancer Cells

There are at least five characteristic features of cancer cells that affect their activity and abnormality. Cancer cells have:

1. less efficient production of cellular energy (ATP);
2. cell membranes that exhibit different electrochemical properties and a different distribution of electrical charges than normal tissues.(Cure, 1991; 1995);
3. different lipid and sterol content than normal cells.(Revici, 1961);
4. altered membrane composition and membrane permeability, which results in the movement of potassium, magnesium and calcium out of cancer cells and the accumulation of sodium and water into cells.(Seeger and Wolz, 1990);

5. have lower potassium concentrations and higher sodium and water content than normal cells. (Cone, 1970, 1975; Cope, 1978)

As a result of these mineral movements, membrane composition changes, energy abnormalities, and membrane charge distribution abnormalities, there is a drop in the normal membrane potential and membrane capacitance. We will now discuss these features in more depth.

Minerals and Membrane potentials

One of the mysteries of cancer is whether energy abnormalities cause or contribute to the mineral alterations, or whether mineral alterations and membrane changes cause or contribute to the observed energy abnormalities. In either case, mitochondrial production of ATP is disrupted. All these bioenergetic abnormalities, generally overlooked by mainstream medical researchers and oncologists, are present and should be addressed therapeutically.

A change in mineral content of the cell, particularly an increase in the intracellular concentration of positively charged sodium ions and an *increase in negative charges on the cell coat* (glycocalyx) are two of the major factors causing *cancerous cells to have lower membrane potentials* than healthy cells. (Cure, 1991)

Cancer cells exhibit both *lower electrical membrane potentials and lower electrical impedance* than normal cells. (Cone, 1985; Blad and Baldetorp, 1996; Stern, 1999) The reduction in membrane electrical field strength will in turn cause alterations in the metabolic functions of the cell.

As mentioned, normal cells in their resting phase maintain a high membrane potential of around -60mV to -100mV. When cells begin cell division, and DNA synthesis, the membrane potential falls to around 15mV. (Cure, 1995) Then, when cells

complete their cell divisions, their membrane potentials return to normal. This also strongly indicates genetic activity occurring during mitosis is electromagnetically supported, if not driven.

Related findings were published in *Science* by Seykally and colleagues at the University of California's chemistry department. These investigators determined the electrical gradient between DNA's inner and outer regions, was in the neighborhood of -200mV when adequately hydrated with structured water. During mitosis, and DNA dehydration, electrical potentials drop almost a hundred fold.(Seykally, 1996) Putting these findings together, it is possible that mitosis places an extra burden on the structured water matrix of DNA resulting in reduced electrical potentials.

According to Cone, *another outstanding electrical feature of cancer cells, other than maintaining their membrane potential at a low value, their intracellular concentration of sodium is higher.*(Cone, 1970, 1975, 1985) Cone has discussed in his publications that a sustained elevation of intracellular sodium may act as a *mitotic trigger* causing cells to go into cell division (mitosis), an earmark of cancer cells.(Cone, 1985).

It is generally thought that a steady supply of cellular energy and a healthy cell membrane are needed to maintain a normal or healthy concentration of intracellular minerals and a healthy membrane potential. This means that conditions associated with: 1) disruption of cellular energy production, and 2) membrane structure/function alterations, will result in changes in the intracellular mineral concentration and a lowered membrane potential.

This statement may be true for all injured cells besides cancerous ones.

Dr. Cure has proposed that the accumulation of an *excessive amount of negative charges on the exterior surface of cancer cells will depolarize cancer cell membranes.* As previously stated, he also believes that the depolarization (i.e., fall in membrane potential) of the cancer cell membrane due to the accumulation

of excess negative surface charges may *precede and create* the reduction in intracellular potassium and the rise in the intracellular sodium launching the cell into a carcinogenic state.(Cure, 1991)

The implications of this heavily supported thesis are profound in terms of the potential role genes play in cancer. If the creation of an excessive negative charge on the surface of a cell can initiate a carcinogenic change, then it likewise means *genetic changes can result from the development of cellular electrical abnormalities*. This also means that the development of genetic abnormalities may not be the prime factor leading to cancerous transformation. This contradicts the dogma regurgitated by mainstream authorities for most of the twentieth century.

Cure's theory dovetails with Dr. Paul Gerhardt Seeger's work as well. Seeger, another distinguished cancer investigator, proposed that cancer arises from alterations in the functions of cell organelles outside of the nucleus.(Seeger and Wolz, 1990) This idea suggests that *certain chemicals, viruses, and bacteria may predispose to carcinogenesis by modifying the electrical charge of the cell surface resulting in alterations in: a) cell membrane and organelle membrane electrical potentials, b) the functions of these membranes, c) intracellular mineral content, d) energy production, and e) genetic expression*.

This knowledge also implies that therapeutic methods that modify the electrical charge of cell membranes, the composition of cell membranes, and the content of intracellular minerals, also result in alterations in genetic activity.

A healthy cell membrane potential is strongly linked to the control of cell membrane transport mechanisms as well as DNA activity. It is also critical for protein synthesis and aerobic energy production. Since injured and cancerous cells cannot maintain a normal membrane potential they will have electronic dysfunctions that will impede repair and the reestablishment of normal metabolic functions. Therefore, *a key component of cell repair*

and effective cancer treatment would be to reestablish a healthy membrane potential in the body's cells. (Nieper, 1966a, 1966b, 1966c, 1967a, 1967b, 1968, 1985; Alexander, 1997b; Nieper et al., 1999)

More on the Electrical Properties of Cells

The idea of classifying cancers by their electrical properties is old. In fact, it was first proposed by Fricke and Morse in 1926. (Fricke and Morse, 1926) In 1981, Foster and Schepps determined the lowered electrical conductivity of cancerous tissues, and heightened resistance to the formation of bioelectric fields, differed significantly from normal tissues. (Foster and Schepps, 1981) These investigators also determined that cancerous cells resonated differently from normal cells.

More recently investigators learned that the electrical conductivity of a tissue depends on both the “physicochemical bulk properties” properties of tissue fluids and solids and the microstructural properties (i.e., the geometry of microscopic compartments). This appears to be related to the electrical conductivity and permittivity of biological materials which varies characteristically *depending on the frequency of energy influencing the system.* (Scharfetter, 1999)

In healthy tissues, electrical currents are carried by both ionic conduction and electron semiconduction. In electrical equipment, on the other hand, only electrons, or electron holes, carry the electrical current. Therefore, the electrical properties of biological tissues depend on the physical mechanisms which control the mobility and availability of the relevant ions such as sodium, chloride, potassium, magnesium and calcium. (Scharfetter, 1999)

The electrical charges associated with semiconducting proteins and extracellular matrix proteoglycans also contribute to the conductivity of a tissue.

Moreover, the electrical properties of tissues relates to electron availability, which can be affected by such factors as: a) the degree of tissue acidity, b) the degree of tissue hypoxia, c) the degree that water is structured, d) the availability of electron donors such as antioxidants, and e) the presence of electrophilic compounds on the cell membrane and in the extracellular matrix (ECM).

The cell membrane CM interface is the location where molecules like hormones, peptide growth factors, cytokines, and neurotransmitters initiate chemical signaling from cell to cell and where these *chemical-signaling events can be regulated and amplified by the weak nonionizing oscillating electromagnetic fields that are naturally present* in the ECM. (Adey, 1988)

The cell membrane ECM interface has a lower electrical resistance than the cell membrane so electrical currents will be preferentially conducted through this space. This cell surface current flow is involved in controlling many of the physiological functions of the cells and tissues.(Adey, 1981)

Conductivity in both healthy and diseased tissues, including malignancies, can be affected by variations in: temperature, oxygen levels, mineral concentrations in intracellular and extracellular fluid, the types of minerals present in intracellular and extracellular fluids, pH (both intracellular and extracellular), level of hydration (cell water content and extracellular water content), the ratio of structured/unstructured water inside of the cell, membrane lipid/sterol composition, free radical activity, the amount of negative charges present on the surface of cell membranes, the amount and structure of hyaluronic acid in the ECM, the emergence of endogenous electrical fields, the application of external electromagnetic fields, and the presence of chemical electrophilic toxins and heavy metals both within the cell and in the ECM.

In summary, the electrical properties of sick cells are different than the electrical properties of the normal tissues that

surround them. Many authors have reported that cancer cells have higher intracellular sodium, higher content of unstructured water, lower intracellular potassium, magnesium and calcium concentrations, and more negative charges on their cell surface. (Hazelwood et al., 1974; Cone, 1975; Cope, 1978; Brewer, 1985, Cure, 1991) These abnormalities result in cancer cells having lower transmembrane potentials than normal cells and altered membrane permeability. These cell membrane changes interfere with the flow of oxygen and nutrients into the cells and impair aerobic metabolism causing cancer cells to rely more on anaerobic metabolism for energy production. Anaerobic metabolism, excessive sodium concentrations, low transmembrane potential and pH alterations in turn create intracellular conditions more conducive to cellular mitosis. Recognizing that cancer cells have these altered bioelectric and electrochemical properties also leads to the formulation of strategies directed toward correcting these properties.

Very briefly, according to Dr. Robert Pekar, “Every biological process is also an electric process,” and “health and sickness are related to the bioelectric currents in your body (Pekar, 1997).” Alternatively, Dr. Merrill Garnett might conclude cancer, and other biological challenges, are first and foremost electrogenetic disturbances vibrational dissonance with a universal rhythm.

Chapter 6.

Beginning Electrogenetics

“One does not need to believe in reincarnation to explain why many people feel they have ancient memories—lucid flashbacks to age-old emotion-packed events—or even Divine callings. These experiences may be associated with ancestral memories transmitted through hydro-electrified DNA. . . . This theory is adequately supported by recent advances in electrogenetics, protein crystal science, and structured water biochemistry. . . . Simply consider the subtle, yet powerful, frequency transmission capabilities and energy capacitance facilitated by DNA clustered-water nucleosome resonances. Some of these may be encoded with a spiritual flow containing ancient data.”

Leonard G. Horowitz, D.M.D., M.A., M.P.H.
Healing Celebrations Lecture, 2001

Cells exist within an electro-energetic continuum where they are most often attached to other cells of the same type. The blood is one such pulsating vibrational tissue. It delivers vitally important nutrients and elements that also vibrate energetically—bioelectrically and electrochemically. Oxygen especially is “spiritually uplifting” in this way. Therefore, since the cells of the body require a steady supply of nutrients, they are typically located in close proximity to blood vessels for a steady stream of energetic elements and vibrational molecules.

The extracellular matrix (ECM) occupies an intermediate position between the blood vessels and the cell membrane. This major anatomical area is worthy of further examination in light of determinations discussed in the last chapter. This chapter provides an introduction to advanced electrogenetic concepts including: 1) the *intravascular space* and its components and energetics; 2) the cell membrane and the attached glycocalyx;

3) components of the extracellular matrix (ECM) and; 4) the ECM-glycocalyx-membrane interface.

The *intravascular space* and its components has functions besides nutrient transport into cells. Toxin export away from the cells is another critical function. Another is a control function whereby soluble hormones and growth stimulants and inhibitors are selectively sent to cells from endocrine sources in distant locations.

As discussed in the last chapter, cell membranes and the attached glycocalyx maintain electrochemical and anatomical roles vital to health and normal bioenergetic systems. The cell membrane can be thought of as the “gate-keeper” of the cell that controls the inflow and outflow of nutrients and electric currents to and from the cell’s interior. It regulates the active transport of nutrients such as minerals and amino acids, and the vitally important removal of toxins. For this reason, the cell membrane is an operational interface between the cell interior, other cells, and the components of the ECM. The cell membrane mediates adherence and communication with other cells, the ECM, and components of the immune system.

Normal multicellular organisms require coherent and coordinated communication of each cell with every other cell in the organism. In order to synchronize cellular processes in a multicellular state a communication system must and does exist. For most of the last century biological science has concentrated almost exclusively on explaining the communication system of multicellular organisms by focusing on circulating chemical messengers carried by the bloodstream. This paradigm attributes communication at the cellular levels to molecular interactions, chemical concentrations, and chemical kinetics. This entire paradigm, though obviously important, is seriously limited, if not archaic, reflecting on more modern knowledge. It is as though the purveyors of mainstream science want to deny the energetic, bordering on spiritual, foundation of life. Beyond “separation of church and state,” why do you think this condition persists?

Sure you could argue that cell membranes contain docking ports on their surfaces called receptors. Indeed, these allow cells to pick up distant chemical signals (hormones, neurotransmitters, prostaglandins, etc.) sent by other cells through the bloodstream, along with local chemical signals generated by components of the ECM and immune cells. However, as will be discussed later in this chapter, *it is likely that even these cell receptors function as antennas for particular frequencies of electromagnetic energy.* (Haltiwanger, 1998)

For example, as you might expect, the cell membranes of cancer cells are different from normal cells. Cancer cell membranes have alterations in their lipid/sterol content. (Revici, 1961) The types of glycoproteins and antigens that they express is also different. (Warren et al., 1972; Hakomori, 1990) Cancer cells also exhibit the ability to express their own growth factors and the ability to ignore growth factor inhibition control exerted by the ECM. Is all or most of this energetically driven?

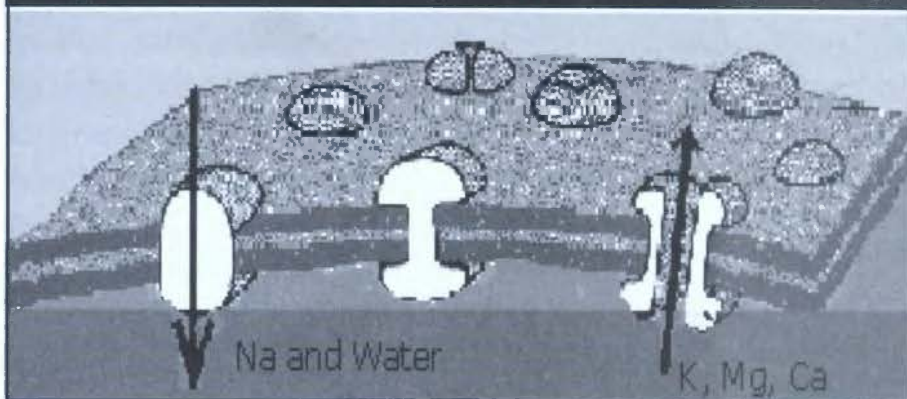
To better understand the answer, how and why this occurs, you must consider the extracellular space and the components of the extracellular matrix that connect to the cytoskeleton of the cells.

Magnifying the Extracellular Energy Apparatus

As mentioned, the extracellular matrix (ECM) occupies an intermediate space between the intravascular space and the boundary of cells as shown in figures 6.1 and 6.2. In this position the ECM can be considered to function like a “prekidney,” since all substances that have to be eliminated through the bloodstream and kidneys must first pass through the ECM. Thus, the ECM is also a transit and storage area for nutrients, water, and waste.

The ECM pervades the entire organism and reaches most cells in the body. Certainly, under-acknowledged, the ECM has unique anatomic, chemical, and electronic functions.

Fig. 6.1. Ionic Charges Flow During Injury



Cells that are damaged by physical trauma or metabolic alterations consistently show the same set of electrolyte and fluid abnormalities—they lose potassium and magnesium, accumulate sodium, and swell with water.(Cone, 1975) In this condition, they are energetically compromised and may be further transformed into cancerous cells.

Healthy cells maintain, inside of themselves, a high concentration of potassium and a low concentration of sodium. But when cells are injured or cancerous, sodium and water flows into the cells and potassium, magnesium, and calcium are lost from the cell interior. This is accompanied by a fall in cell membrane potential.(Cone, 1970, 1975, 1985; Cope, 1978) The accumulation of water and Na^+ causes cancer cells to swell, which changes their geometry, electrical conductivity, and their electrical connections.

"During the process of cancer genesis, the cell becoming cancerous loses the calcium lining of its inner membranes, with potassium and magnesium also being lost." (Nieper, 1985)

The loss of the calcium lining on the inner cell membrane along with mineral and water abnormalities, and the development of a strong electrically negative cell coat, are all factors that contribute to a reduction in the electrical potential of cancer cell membranes.

Anatomically, the *ECM* consists of a *reticulum* consisting of *polymeric protein-sugar complexes bound to water forming a gel state*.(Oschman, 2000) The cytoplasm inside of cells also exists in a gel state. *The liquid crystal properties of the molecules in these compartments allow them to undergo cooperative phase transitions in response to changes in temperature, pH, ion concentrations, oxygen concentration, carbon dioxide concentration, ATP concentration, physical factors, and other electrical fields*. Thus, what was hither-to-fore largely ignored by mainstream medical scientists, the *ECM* contributes greatly

to the organization of tissues, whole body coordination through communications and especially electrodynamics.

Given the composition and organization of the ECM is similar to the intracellular cytoplasm, cells can now be seen as organized structures with an internal architecture of cytoskeletal proteins that connect all components of the cell to the rest. Enzymes of the cell are attached to the cytoskeletal framework and membranes creating solid-state chemistry.(Ho, 1996) In fact, contrary to popular opinion, enzymes are not floating randomly around the cell, but connected to a whole bioelectrical network.

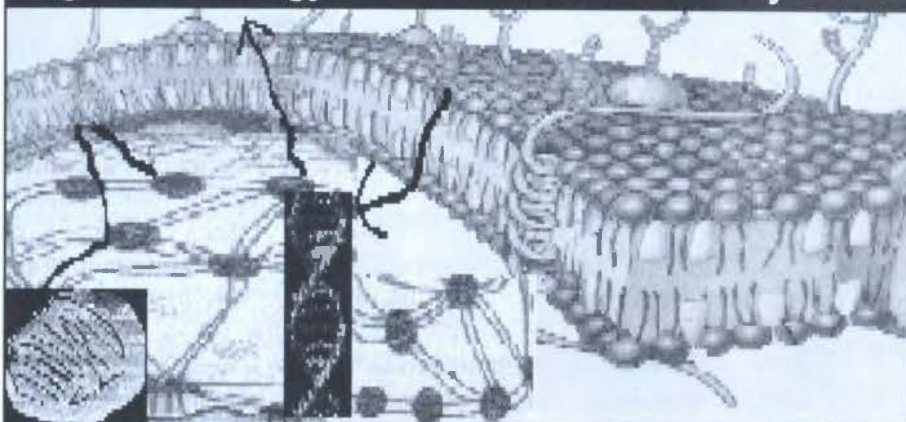
In fact, as you may recall from figure 5.5, *cytoskeletal filaments and tubules (within the cells) form a continuous system that links cell surfaces to the nucleus and all cellular organelle as well as other structures outside of cells.* This communications network facilitates the passage of electrogenetic information—energetic communications—through the nuclear membrane to, theoretically, every cell. Thus, from the nuclear DNA the cytoskeleton attaches through cell membrane connectors to liquid crystal protein polymers located in the ECM to other cells and the entire organism.

The liquid crystal protein polymers of the ECM are mostly composed of collagen, elastin, hyaluronic acid, and interweaving glycoproteins such as fibronectin. Fibronectins bind the ECM proteins to each other and to cell membrane proteins called *integrins*. With this in place, a continuous linkage occurs from cell to cell through integrins to intracellular liquid crystal proteins onward to and from nuclear DNA.(Oschman, 2000)

Passages Through the ECM

Physically, the ECM acts as a molecular sieve between the capillaries and the cells.(Reichart, 1999) The filtering aspect of the ECM is controlled by a combination of factors including the concentration of minerals in the ECM, the composition of proteoglycans, the molecular weight of the proteoglycans, the amount of bound water in the ECM, and the pH of the ECM.

Fig. 6.2. Energy and Communication Systems



The linking of the internal electronic communication system of the cell to the external electronic communication system outside of the cell creates a body-wide communication network that allows you to function as a biological hologram.

As discussed previously, cells are organized resonating energy structures with an internal architecture of cytoskeletal proteins that connect all components of the cell to the ECM and to other cells.

Special "linking" molecules (i.e., integrins) extend from the inside of your cells, through cell membranes to form connections between the liquid crystal (LC) proteins of the extracellular matrix (ECM) and the LC components of the cytoplasmic matrix (CM). Liquid crystallinity gives cells and organisms their characteristic flexibility, and exquisite sensitivity to electromagnetic fields (EMFs), which optimizes rapid intercommunication that enables organisms to function as coherent coordinated biological holograms. (Beal, 1996) This also explains the almost instantaneous energy differentials occurring in various parts of the body following the administration of energy therapeutics such as acupuncture, homeopathics, and clustered water solutions.

Biological LC molecules such as DNA, hyaluronic acid, cytoskeletal proteins and cell membrane components are involved in maintaining both an inward and outward current between the interior of the cell, and the ECM. The inward current flows from the cell membrane to cell structures like mitochondria and DNA and the outward current flows back along liquid crystal semiconducting cytoskeletal proteins back through the cell membrane to the ECM.

Holographic cell communications depend on maintaining the health of the extracellular energy conducting matrix and its structural and electrical connections with the cells. Glycoproteins that are anchored in the cell membrane play a key role in communications (i.e., energy signaling) between the ECM and cell interior and vice versa.

Cell enzymes are also attached to the cytoskeletal framework creating solid state chemistry. Enzymes are not floating randomly within cells.

The ECM is also a transit area for immune cells that move out of the bloodstream. These immune cells are involved in inflammatory reactions by secreting *cytokines* and digesting old worn out cells. They may also facilitate healing by carrying and delivering components from other areas of the body to the cell membrane. These migrating immune cells, as well as fixed cells, regulate cellular functions by secreting growth factors and cell growth inhibitors.(Reichart, 1999) All of these functions are heavily influenced, if not entirely regulated, by bioelectric phenomena.

The ECM additionally functions as a storage reservoir for water, nutrients, toxins, and pH buffering proteins.

In healthy conditions most of the water in the ECM is bound to the interweaving proteoglycans forming a gel which creates a physical barrier that limits, directs, and evenly distributes the flow of fluid from the venule end of the capillaries to the cells.

When conditions create edema in the ECM, fluid flows more easily from leaky capillaries, but these large flows of fluid are variably distributed, which interferes with nutrient delivery, oxygen perfusion, and waste disposal. In edematous conditions, the ECM becomes more hypoxic, more acidic, and electrically more resistant. Bioflavonoids are some of the most effective nutrients in reducing capillary leakage, which helps reduce edema. In a sense bioflavonoids could be considered electrical nutrients because they help improve the electrical conductivity of the ECM by helping reduce capillary leakage and ECM edema.

Furthermore, the biochemically active ECM is a metabolically and electrically active region that is involved in regulating cell growth. Cellular components of the ECM are involved in the local production of growth factors, growth inhibitors, and cytokines that affect the growth and metabolic activity of tissue/organ cells. (Reichart, 1999) Immune cells such as leukocytes, lymphocytes, and macrophages that migrate into the ECM are involved in initiating the removal of old and damaged cells, and stimulating the growth of new cells.

Fibroblasts and fibrocytes are the main cells that produce the proteins and ground substance of the ECM in soft tissue.

The glycocalyx (sugar cell coat) is produced by the cells of parenchymal organs and secreted onto their cell surfaces. The ECM and the glycocalyx work together to regulate information transfer to and from tissue/organ cells by both electrical field fluctuations leading to electroconformational coupling and soluble signaling molecules.

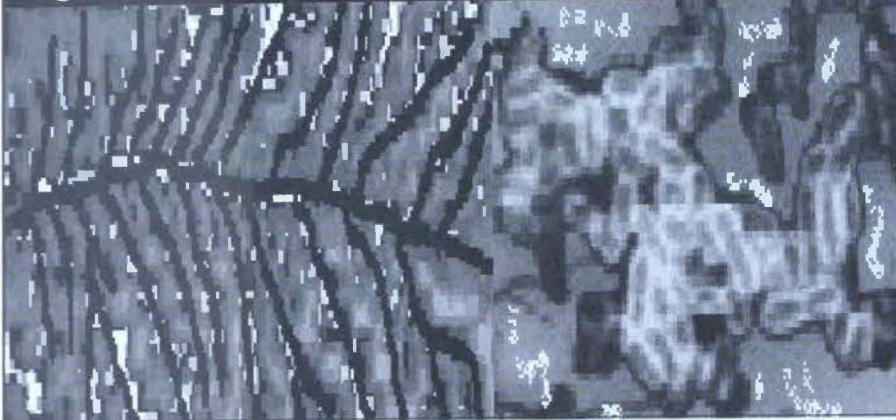
Electronic functions of the ECM

According to James Oschman, communication systems in living organisms involve two languages—chemical and energetic. (Oschman, 2000) Chemical communication in your body takes place mainly through your circulatory system. Energetic communications, according to Western Medical paradigms, take place almost exclusively in your nervous and endocrine systems. But Oschman and Mae Wan Ho (Ho, 1998) wrote extensively about an evolutionarily older solid-state electronic communication system that operates both in series and in parallel with your nervous system through liquid crystal, that is LC, protein polymers. It is through this LC continuum that information is carried in biological systems via endogenous DC electric fields, their associated magnetic fields, and ultra-weak photon emission, all in communication with DNA.

This continuum of liquid crystal connections allows electrons and photons to move in and out of cells. In this system of energy propagation, Cytoskeletal filaments may function as electronic semiconductors, and like fiber-optic cables, integrating information flow both within the cell and between cells.

Given this update on human bioelectrics, the extracellular connective system, spread diffusely throughout the body, clearly functions as an unrecognized organ. (See figure 6.3.) Medical doctors are trained to think of organs as discrete tissues that have

Fig. 6.3. Extracellular matrix (ECM) and Bioenergetics



The ECM proteoglycans exist in fern shapes that allow electric charges to flow.

Disorganized shapes of proteoglycans also exist and impair electrical current transit through the ECM. These chaotic shapes occur when tissue inflammation is present and toxins are present in the ECM. These health risks create areas of high electrical resistance within the ECM and organism as a whole. Likewise, tissues that are injured have a higher electrical resistance than surrounding tissues. The cell membranes and the ECM of injured tissues become less permeable to the flow of ions and more electrically resistant. Such damage results in the endogenous bioelectric currents avoiding these areas. (Wing, 1989) This reduction in electrical flow through an injured area also interferes with nutrient flow and wound healing.

Decreasing the electrical flow through an injured area also results in a decrease of the cell membrane charge and transport of nutrients into your cells. Conversely improving the electrical conductance of the ECM will improve nutrient entry, cell membrane charge, and healing. (Wing, 1989) Correction of ECM toxicity can improve the electrical functions of the ECM. Therefore, the composition and degree of toxicity of the ECM-glycocalyx interface will affect the electrical field and the flow of biocurrents and nutrients to and from the ECM.

particular anatomical locations. We now understand connective tissues function as a specialized organ might. They integrate all parts of your body into a holographic matrix. Each organ, even each cell, is not only in communication with all other body parts simultaneously, but is being energetically activated, if not bio-electrically precipitated, at every instant.

But what about circulating vascular cells and migrating immune cells? Rather than being attached to connective tissue fibers, how do they communicate or energetically manifest? We believe these cells communicate both by chemical and resonant interactions. We understand that energetic communications in the body takes place through hard-wired bioelectronic systems, biologic fiber-optic systems, as well as through resonant interactions.

Electronics Underlying Healing and Regeneration

By this time, you should clearly understand that cells are intimately interconnected bioacoustically and electromagnetically. They generate their own sound frequencies and electromagnetic fields, and they also harness external electromagnetic energy of the right wavelength and strength to communicate, control, and drive metabolic reactions. Again, much, maybe even all, of this is mediated through the DNA.

How is all of this engaged in *bioelectric* and *bioacoustic* regeneration and healing?

Before we answer this vitally important question, we need to take you a couple of steps further in understanding the DNA-regulated body electric.

Most of the molecules in your body are *electrical dipoles*, meaning that they possess two types of bioenergetic capabilities. These dipoles electronically function like transducers in that they are able to turn *acoustic waves into electrical waves and electrical waves into acoustic waves*. (Beal, 1996) This natural property of biomolecular structures enables cell components, and whole cells, to oscillate and interact resonantly with other cells. According to Smith and Best, authors of *Electromagnetic Man*, the cells of your body and cellular components possess the ability to function as *electrical resonators*. (Smith and Best, 1989)

Professor H. Frohlich has predicted that the fundamental oscillation in cell membranes occurs at frequencies of the order of

100 GHz. Furthermore, biological systems possess the ability to create and utilize coherent oscillations and respond to external oscillations. (Frohlich, 1988) This information is simply ignored or even suppressed. Lakhovsky predicted that cells possessed this capability in the 1920s.(Lakhovsky, 1939)

Because cell membranes are composed of dielectric materials, a cell will behave as a dielectric resonator and will produce an evanescent electromagnetic field in the space around itself. “This field does not radiate energy but is capable of interacting with similar systems. Here is the mechanism for the electromagnetic control of biological function.”(Smith and Best, 1989)

Electric fields induce or cause alignment in dipoles. Dipole molecules function as a result of their polarization processes within electric fields. When biological tissue is exposed to an electric field in the *right frequency and amplitude windows*, a preferential alignment of dipoles becomes established. Since cell membranes contain many dipole molecules, such electric fields will cause preferential alignment of the dipoles. This may be one mechanism whereby electrical fields can alter membrane permeability, membrane functions, and through the liquid crystal cytoskeleton and ECM, generalized regeneration and healing.

Both internally generated and externally applied electromagnetic fields can affect cell functions. The primary external electromagnetic force is the sun, which produces a spectrum of electromagnetic energies. Life evolved utilizing processes that harness the energy of light to produce chemical energy, so in a sense sun light is the first nutrient.

Endogenous weak electric fields are naturally present within all living organisms and apparently involved in dipole pattern formation, membrane alterations, and tissue regeneration.(Nucitelli, 1984)

As discussed in figure 6.3, regeneration is a healing process where your body can replace damaged cell networks and organs apparently bioelectrically!

Some of the most important biophysical factors implicated in tissue repair and regeneration involve the natural electrical properties of the body's tissues and cells.(Brighton et al., 1979) Two examples are cell membrane potentials and protein semiconduction of electricity. The body utilizes these fundamental bioelectronic features to naturally produce more electrical currents that are involved in repair and regeneration.(Becker, 1961, 1967, 1970, 1972, 1974, 1990) Robert O. Becker has repeatedly shown experimentally, and through published research, that the flow of endogenous electrical currents in the body is not a secondary process, but is, in fact, an initiator and control system used by the body to regulate healing in bone and other tissues.(Becker, 1970, 1990; Becker and Selden, 1985)

Using this example of broken bones, the proper production and conduction of endogenous electrical currents is required to stimulate primitive precursor cells to differentiate into osteoblasts and chondroblasts.(Becker and Selden, 1985; Becker, 1990) Once the bone forming osteoblasts are created, they must maintain a healthy cell membrane electrical potential and have available certain critical nutrients in order to form the polysaccharide and collagen components of osteoid. Endogenous bone electrical currents created through piezoelectricity are also required for deposition of calcium crystals.(Fukada, 1957, 1984; Becker et al., 1964)

Thus, when the biophysical electrical properties of your tissues are considered, it makes sense to develop treatment protocols that support your body's innate biophysical electrical processes to potentiate healing and tissue regeneration.

This also affirms that the applications of certain frequencies by frequency generating devices, including toning and color therapies, human hands-on-healing, prayer or chanting for healing, and many other bioacoustic and electromagnetic therapies discussed in Chapter 12, can impact cellular resonance, metabolism, and electrical functions.

Bioelectric Stealthing and Healing

To reinforce your memory, recall that cell membranes are composed of phospholipids, sterols, and embedded proteins including electrically active surface glycoproteins. The composition directly affects membrane permeability and the electrodynamics of cell signaling and cell capacitance.

In review, glycoproteins secreted from the cell interior, and cellular components of the ECM, create the glycocalyx covering of cells. Some of these glycoproteins are components of cell membrane receptors making them important in signaling processes such as activation by growth factors. These glycoproteins characteristically have a negative electrical charge. Diseased and cancer cells, however, have excessively high concentrations of negatively charged molecules on their exterior surface, which act as electric shields. This appears to cloak, “stealth,” or shield cancer, and similarly electrically-polarized cells, from immunological attack.(Cure, 1991, 1995)

Cell membrane glycoproteins act as molecular chemical receptors and electromagnetic or electric field antennas.(Adey, 1988) Instead of heralding this knowledge, the pharmaceutical industry and mainstream medicine has focused exclusively on chemical communications mediated by chemicals or drugs that travel through the bloodstream, and then through the ECM, to target organs and cells. Many of these signaling molecules are produced naturally by endocrine cells, or are secreted by cells embedded within the ECM or cells that migrate into the ECM such as macrophages, T-cells, and B-cells. When these soluble signaling molecules are presented to the target cells they either activate or inhibit cellular metabolic reactions by activating cell membrane or cytoplasmic glycoprotein receptors.(Reichart, 1999)

This limited, and largely repressive, biomedical model is justified using knowledge that chemical signal activation of cell receptors will cause the receptor’s molecular structure to shift

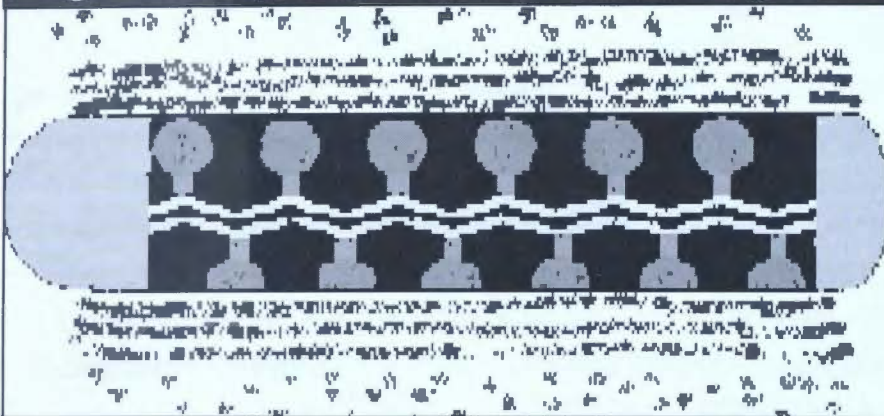
from an inactive to an activated conformational state. This is a phase transition. When a receptor is activated it will bind to and activate other membrane bound proteins or intracellular proteins/enzymes. The outcome of receptor activation may: increase the transport of certain molecules or mineral ions from one side of the cell membrane to the other side; increase or inhibit the activity of enzymes involved in metabolic synthesis or degradation; activate genes to produce certain proteins; turn off gene production of other proteins or cause cytoskeletal proteins to change the shape or motility of the cell. When the receptor protein switches back to its inactive conformation it will detach from the effector proteins/enzymes and the signal will cease.(Van Winkle, 1995; Haltiwanger, 2002)

More truthfully and wholistically, *cell receptors can also be activated by electrical fields*. Vibrational resonance having particular frequencies and amplitudes can trigger cell membrane activations through a process known as *electroconformational coupling*.(Tsong, 1989) Electrical oscillations of the right frequency and amplitude can alter the electrical charge distribution in cell receptors causing the cell receptors to undergo conformational changes *just as if the receptor was activated by a chemical signal!*

Ross Adey has extensively described this and more in his publications. He has shown that the application of weak electromagnetic fields of certain windows of frequency and intensity act as *first messengers* by activating glycoprotein receptors in the cell membrane.(Adey, 1993) This electrical property of cell receptor-membrane complexes allows cells to scan incoming frequencies and tune their circuitry to allow them to resonate at particular frequencies. (Charman, 1996)

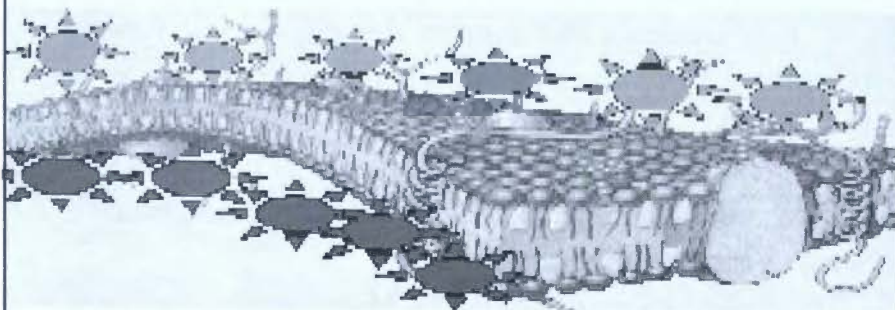
Adey and other researchers have reported that one effect of the application of weak electromagnetic fields is the release of calcium ions inside of the cell. Adey has also documented that cells respond constructively to a wide range of frequen-

Fig. 6.4. Special Structural Energetics



The DNA and proteins of a healthy cell exist in a normal electronic configuration where a significant proportion of cell water is structured or bound in concentric rings around the helical structures. In addition, negatively charged sites on the protein matrix have a preference for association with potassium rather than with sodium (Cope, 1978; Haltiwanger, 2004).

The ability of cell proteins to stay in their normal configurational state depends on your cells being free from chemical, physical, or hypoxic damage. When physical, chemical, or hypoxic damage occurs to a cell many cell proteins will change to an abnormal damaged configurational state. In that state "the cell proteins lose their preference for association with potassium rather than sodium, and lose much of their ability to structure water" (Cope, 1978).



Each cell membrane consists of a layer of non-conductive fatty material sandwiched between two layers of conductive minerals and protein molecules. This structure facilitates its functions as a selectively permeable barrier that maintains a concentration gradient of different minerals between the intracellular and extracellular compartments. This gradient creates an electrical potential difference across the membrane which also plays a role in energy transmissions and network communications from DNA through the ECM.

cies. These include frequencies in the extremely low frequency (ELF) range of 1-10 Hz—a range of frequencies known as the Schumann resonance frequencies. These are naturally produced in the atmosphere. Part of the natural “background” radiation,” they emanate from the cosmos, or as Dr. Horowitz prefers to call it, the “Creator’s Orchestra.”(Adey, 1993)

Adey has also reported that certain frequency bands between 15-60 Hz have been found to promote cancers. Frequencies in this range have been found to alter cell protein synthesis, mRNA functions, immune responses, and intercellular communication .(Adey, 1992)

The ECM also contains nerve fibers connected through the autonomic nervous system back to the brain, which then regulates hormone homeostasis by feedback control through the hypothalamic-pituitary gland axis.

Resonance in the Extracellular matrix (ECM)

Your body uses electricity (biocurrents) for controlling growth and repair.(Borgens et al., 1989) Some of these biocurrents travel through hydrated liquid crystal semiconducting protein-proteoglycan (collagen-hyaluronic acid) complexes of the ECM. Key elements that support this physiologic function include proper hydration and normal protein configurations which allow for body water to be structured in concentric nanometer-thick layers.(Ling, 2001). The production of normal ECM components, and proper ion concentrations, are also important in this system of bioenergetic regulation.

The ground substance of the ECM contains an electrical field that fluctuates in response to the composition of proteoglycans, especially the degree of negative charge, which depends on the concentration of sialic acid residues and the ion/mineral content of the ECM. These fluctuations/oscillations of the electric field of the ECM, when strong enough, can lead to local depolarization of portions of the cell membrane and changes in membrane

permeability. These oscillations of electrical potentials can also affect, through resonance (and electrochemical coupling), the conformational structures of cell membrane receptors.

Receptors can switch back and forth between conformations, which will lead to turning on the activity of membrane embedded enzymes and opening and closing ion channels.

Electrical field fluctuations that occur in the ECM, and these field fluctuations, are also involved in cell signaling mechanisms. A number of researchers such as Becker and Adey believe that *natural weak endogenous electric fields actually control the chemical processes involved in cell membrane signaling*. This means that measures that enhance or disturb the production of these natural electric fields can impact cell-signaling processes and health status.

Using this knowledge, electromedicine has advanced to the point where you can dial up and administer frequencies that will act like pharmacological agents. In fact, the Merck Index already lists the resonance frequency of nearly every drug.

Likewise, the natural oscillating electrical potential of the ECM can be adversely affected, or constructively supported, by exposure to external electromagnetic fields. Adverse electromagnetic field exposure can be initiated by exposure to high-tension power lines, electrical transformers, and electronic equipment such as computers and cell phones. Constructive support includes the use of certain nutrients and devices like infrared emitters, phototherapy equipment, acoustical (sound) wave generators, multiwave oscillators, and microcurrent equipment that emit electromagnetic fields and electrical currents in physiological ranges, or other technologies including frequency attenuators.

The Bioelectrical Control System

Healthy ECM function depends on internal cellular machinery that produces proteins, sugars, collagen, hyaluronic acid, and proper reading of the genetic code. In addition, this electrogenetic control system depends on the availability of construction ma-

terials, like amino acids lysine and praline, needed for collagen production. Other important factors in this bioelectrical system include cofactors of protein and sugar to produce enzymes such as zinc, magnesium, trace minerals, vitamin C, bioflavonoids and B-complex vitamins; and the availability of endogenously produced and ingested precursor molecules such as glucosamine, mannose, galactose, etc.(Haltiwanger, 2002)

Central to electrogenetic control are biocurrents in the ECM that pass through the cell membrane into the cell, and the electrons produced in the cells that pass out through the cell membrane. Dr. Merrill Garnett, introduced previously, spent four decades studying the role of charge transfer and electrical current flow inside of cells.(Garnett, 1998) He concluded that biological liquid crystal molecules and structures such as hyaluronic acid, prothrombin, cytoskeletal proteins, and cell membranes are involved in DNA expression and maintaining inward and outward biocurrents.

In review, inward current flows from the cell membrane to DNA and the outward current flows back along liquid crystal semiconducting cytoskeletal proteins back from DNA through the cell membrane to the ECM.

Dr. Garnett reported that this inward and outgoing energy system fails during carcinogenesis. Electron transfer systems and normal cell development is disrupted at this time.(Garnett, 1998) Electrical charges stored in the cell membrane (capacitance), and electrical charges of oxygen free radicals, are normally transferred to DNA and are involved in DNA activation. This helps create an electrical field around the genome. Then, DNA is very effective in transferring large amounts of this electrical charge along its long axis. In fact, new research shows that DNA molecules may be good molecular semiconductors.(Li and Yan, 2001)

Electrical pathways from cell membrane fats to DNA are involved when cells use aerobic mechanisms of ATP production.(Garnett, 1998) As a corollary, these natural electrical pathways are transiently disrupted in healthy cells during wound healing, and permanently disrupted in cancer cells that rely on anaerobic glycolysis for energy production.

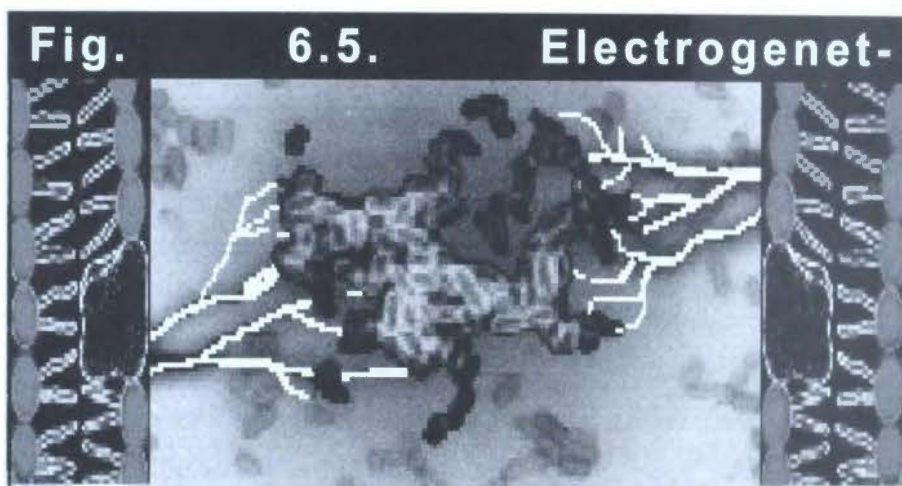
Dr. Garnett theorized that an alternating current oscillating circuit exists inside of cells between the cell membrane and the DNA that is conducted over electronic protein polymers. This circuit is activated during cell differentiation to trigger the expression of genes.(Garnett et al., 2002) This theory is being increasingly supported by rapidly advancing science. It means your cells routinely use electrogenetics to control almost every activity.

According to Dr. Garnett, the part of the DNA coiled around protein structures called *nucleosomes* may exhibit electronic inductance. "As a coil, it has electronic inductance, and since we have a series of coils, we have a series inductance circuit."(Garnett, 2000)

DNA current passes initially through the helix in a state where it can discharge its field energy. Hence we have a pulse within the DNA interacting with other biomolecules like those in cellular membranes.

Additionally, Dr. Garnett developed Poly MVA, a water-soluble and fat-soluble liquid crystal polymer compound composed of palladium and lipoic acid. This new pharmaceutical is able to enter cells to reestablish electrical connections between cell membranes and DNA. Garnett's research shows that liquid crystal polymers like prothrombin, hyaluronic acid, and palladium-lipoic acid complex, normally produces fernlike structures. These types of structure reflect cymatic energy manifestations that behave like molecular antennas and electrical conductors.

Poly MVA acts as an electrical shunt. It causes cells that utilize anaerobic glycolysis to undergo membrane rupture. It thus specifically targets cancer cells leaving aerobic cells that utilize efficient oxygen-dependent electron transfer undamaged. (Garnett, 1998; Garnett and Remo, 2001) Aerobic cells are protected from Poly MVA electrocution because their functional mitochondria are normally engaged in electron transport ending with oxygen as the final electron acceptor.(Garnett and Remo, 2001)



The electrogenetic transmembrane axis and energy flow affects membrane composition, electrical potential, and membrane permeability. All of these factors affect energy production, nutrient entry, cellular detoxification, and the synthesis of cellular components. Any condition, illness, or change in dietary intake that affects this energy axis will affect the composition of your cell membranes, their associated minerals, membrane potentials and capacitance, and your health.

To reinforce this important understanding, electrical potentials are created in biological structures when an insulating (dielectric) material separates charges. In cells, *the cell membrane functions as a leaky dielectric*. The dielectric characteristics of a material include both conductive and capacitive properties.

When two areas of variable charge are connected, a current will flow in an attempt to equalize the charge difference. A material with an electrical potential possesses the capacity to do work. The ability of cell membranes to store electrical charges is known as biocapacitance.

The location of mineral layers on each side of a cell membrane is important to this energy transfer circuit. These layers create a virtual sandwich of two plates of conducting material separated by an insulating material, or dielectric. The primary function of these dielectric membrane "plates" is to store electrical energy like a battery. A number of capacitors exist in biological tissue, but instead of metal plates, like in batteries, you have hydrated minerals layering each side of your dielectric membranes, plasma membranes, mitochondria, photoreceptors and more.

The membranes of cell organelles like mitochondria in animals, and chloroplasts in plants are, likewise, biological capacitors that maintain the ability to accumulate and store charge, and give it up when needed to do work as with running any type of machinery, mechanical or biological.

As the above diagram depicts, genetic material electrically functions between two cell membranes. Inward electrical current flows from the cell membrane to DNA and outward current flows back from DNA along a liquid crystal semiconducting cytoskeleton. From here, the energy passes through the cell membrane to the ECM. Given this electrogenetic transmembrane axis, electrical fields are readily available throughout the organism to accomplish work.

Healthy cells have membrane potentials between -60 to -100mV. As with DNA electro-measurements, the negative sign of the membrane potential indicates that the inside surface of the cell membrane is relatively more negative than the immediate exterior surface. The transmembrane potential and electric field surrounding healthy cell membranes is enormous. Conservatively, it ranges from 10,000,000 to 20,000,000 volts/meter.

This electrogenetic transmembrane energy appears to fail during carcinogenesis. Electron transfer systems are disrupted as is the normal cell capability to reproduce.

According to Dr. Garnett, membrane capacitance, and electrical charges of oxygen free radicals, are normally transferred to DNA and are involved in DNA activation and energy semiconduction for bioregulation and reproduction. This system is grossly undermined in cancer cells, and generally overlooked by the cancer industry.

As a corollary, these natural electrical pathways are transiently disrupted in healthy cells while they are involved in wound healing.

Dr. Garnett has also theorized that an alternating current oscillating circuit exists inside of cells between the cell membrane and the DNA. Logically, the energy is conducted along the electronic protein polymers forming the intra and extracellular matrices. These circuits are all simultaneously activated during, for instance, fetal development when cell differentiation further triggers the expression of genes. This theory has been increasingly supported by rapidly advancing science. It means the electrogenetic transmembrane axis is vital to biological systems control and development.

Poly MVA's general utility, however, is limited by its high cost as a pharmaceutical and, regretfully, its failure to *cure* cancer. The drug simply arrests the electrical malevolence of cancer, and secondarily the malignancies themselves, so long as it is used.

Final Facts About the Electrical ECM

ECM proteoglycans can exist in fern shapes that allow electric charges to flow, or in chaotic shapes that impair such transit through the ECM of electrical currents and nutrients. These disorganized shapes occur when tissue inflammation is present and toxins are present in the ECM. These factors create areas of high electrical resistance. *Tissues of the body that are injured or diseased have a higher electrical resistance than the surrounding tissue.* The cell membranes of these tissues become less permeable to the flow of ions and more electrically insulated. This results in the endogenous bioelectric currents avoiding these areas of high resistance. (Wing, 1989) The reduction in electrical flow through an injured or diseased area is one factor that inhibits healing.

Preserving, enhancing, or regenerating this natural flow of energy speeds healing. (Becker, 1985)

Likewise, correction of tissue inflammation and ECM toxicity can improve the electrical functions of the ECM and DNA. The composition and degree of toxicity of the ECM-glycocalyx interface will affect the electrical field and the flow of biocurrents in the ECM. The electrical field and biocurrent conduction in the ECM in turn will affect: cell membrane capacitance, permeability of the cell membrane, signaling mechanisms of the cell membrane, intracellular mineral concentrations, nutrient flow into the cell, waste disposal, and DNA-directed energy metabolism. (Wing, 1989; Oschman, 2000).

The ECM can be cleared of toxins by a variety of measures. Detoxification strategies could include the use of antioxidants

and the support of antioxidant pathways, oral enzymes, homeopathic and herbal preparations, chelation (intravenous and oral), infrasonic devices, multiwave oscillators, microcurrent devices, and phototherapy units (lasers and LEDS).

Some clinicians use live blood microscopy to see if their therapies are increasing the entry of wastes into the bloodstream. If a live blood slide shows a marked increase in wastes after a treatment compared to a slide obtained before treatment, then the clinician can tell that his/her treatment is cleaning the walls of blood vessels and removing toxins from the extracellular space.

The body's biocurrents and the electrical field of the ECM, along with those associated with the DNA, controls cell differentiation and the metabolic activity of mature cells. Mesenchymal cells will differentiate under the influence of DNA-propagated electrical fields: fibroblasts to fibrocytes, myoblasts to myocytes, chondroblasts to chondrocytes, and osteoblasts to osteocytes.(Becker, 1985)

The DNAbioelectric control system's contribution to cell differentiation, cell growth, and repair can be assisted by: use of certain types of structured waters that enhance the liquid crystal properties of ECM polymers, promoting cell production of ECM proteins and proteoglycans; providing exogenous growth factor controls and mediators of inflammation, promoting internal production of growth factors and inflammatory mediators by ECM cells, and other methods yet to be discussed.

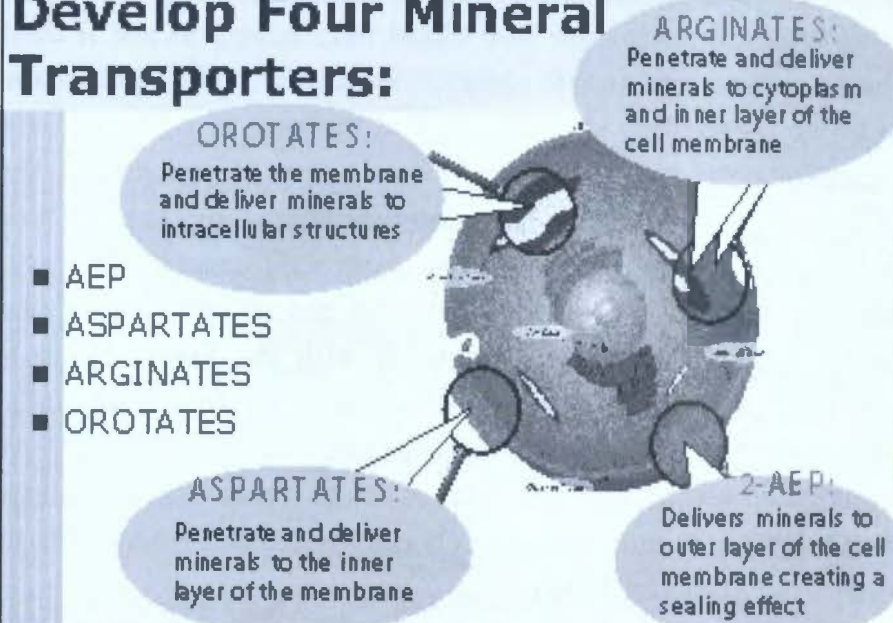
Pathology of the ECM

The ECM can be a storage site for nutrients, or it can be a dumping ground for toxins. Such menaces can disrupt the metabolic and electrical functions of the ECM, ultimately effecting electrogenetic expression.

Deposition of pathological deposits of proteins and toxins in the ECM can lead to degenerative processes. For example, amy-

Fig. 6.6. Membranes and Mineral Transport

Dr. Hans Nieper Helped Develop Four Mineral Transporters:



When a cell shifts into a diseased or cancerous state, embryonic genes are activated. This results in the production of different proteins, enzymes, and membrane components than are produced in normal cells. Cancer cells regress to *anaerobic embryonic metabolism* for energy production. Their normal electrogenetic expression is generally disrupted.

The electro-pathology of cancer is associated with aberrant in: cell membrane permeability, cellular energy production, intracellular magnesium concentrations, and other factors that affect cellular mineral concentrations leading to increased intracellular sodium and water and a loss of potassium.

The principle of using directed active cellular transport as a therapy was described by Hans Selye in 1962. He wrote, "Most diseases appear to be based upon fundamental pathological disturbances of the cell such as membrane permeability, structural alterations, and disturbances of metabolic pathways." Agents proven useful for these pathologies are shown in the above diagram developed from the work of Hans Nieper. These "mineral transporters" have been proposed to help "jump start" proper membrane biocapacitance and electrogenetic regulation of intra and intercellular communications. Contributed by Steve Haltiwanger (2002).

loid can lead to Alzheimer's disease, and immune complex depositions such as those following routine vaccinations, can lead to autoimmune inflammatory illnesses. Inflammatory processes engaging the biochemical and bioelectric mechanisms discussed earlier can lead to the deposition of crystals, calcium, cholesterol, and edema within the ECM.

Acidification of the ECM

As briefly mentioned, the ECM is also a buffering system for acids excreted by the cells. Impairment in the ability to excrete these acids, or over production of acids by metabolic dysregulation, will first lead to acidification of the ECM. Chronic acidification of the ECM will eventually lead to increased acidification of intracellular compartments, which can create impairment of cellular metabolic processes, especially aerobic energy production. Eventually disruption of cellular organelle functions and structures will occur. Excessive acidification of the ECM will also eventually lead to saturation of the buffering capacity of ECM proteins. This will result in mobilization of calcium, magnesium, and heavy metals from the skeleton.

When such demineralization or “mineral spilling” occurs, calcium, magnesium, and other minerals are chronically mobilized from the bone for use as mineral buffers. These minerals will be lost through the kidneys, burdening these organs, and can eventually produce mineral deficiencies—possibly total body depletion of these minerals.

In essence, excessive and prolonged acidic conditions will result in increased mineral mobilization from the skeleton. Such a condition will first create osteopenia (i.e., reduced bone) and in the long run will eventually progress to osteoporosis (i.e., bone holes) and compression fractures.

Last, but not least, increased mobilization of heavy metals will also lead to metabolic stress on the kidneys as these organs

attempt to excrete these metals by use of glutathione detoxification. If the glutathione system becomes depleted due to excessive toxic burden, these heavy metals will accumulate in the kidneys. Heavy metal accumulation in the kidneys may account for a significant amount of hypertension in middle-aged people. This mechanism is one reason that the incidence of hypertension rises in postmenopausal women. According to Dr. Haltiwinder, supporting kidney glutathione detoxification can reduce hypertension in some individuals.(Haltiwanger, 2002)

Chapter 7.

DNA and the Electrodynamics of Cancer

“More effective techniques for the control of population growth are at hand. The genetic code has been deciphered, and the elements of DNA can now be made synthetically. . . . Science . . . whatever its problems, including the apprehension of a popular revulsion against its untoward consequences . . . is an enterprise too dynamic to be ‘turned off.’”

Everett Case, President

Alfred P. Sloan Foundation Annual Report, Spring 1968

In the previous two chapters, the electrodynamics of human biology was discussed. We advanced mechanisms for DNA’s electromagnetic expression. We also introduced cancer and its biochemical and bioelectric antecedents. This chapter takes these subjects to the next level with a strict focus on cancer.

The genetic-electrodynamics of cancer involves several areas of research including mineral and water abnormalities, tumor cell differentiation, oxygen and pH levels impacting gene expression and genetic repair, metabolic pathways for energy production, protein chemistry, molecular biology and more.

We will begin by examining mineral and water abnormalities that impact DNA expression and cancer along with the roles played by sodium, potassium, magnesium, and calcium affecting cell membrane potentials during malignant transformation. This will review foundational discussions upon which more technical knowledge can be advanced regarding the important roles played by cell membrane components in health versus malignancy.

As introduced in previous chapters, the cell membrane is a dividing structure that maintains biochemically distinct compartments between the inside (intracellular) and outside (extracellular) spaces.(Marieb 1998)

The lipid structure of cell membranes makes them relatively impermeable to the passage of charged molecules. As a result, charged molecules must cross through *ion channels* within the membranes to enter or leave cells.

Ion channels are transmembrane protein molecules that contain aqueous pores connecting the inside of the cell to the extracellular space. These channels can open and shut in response to a variety of signals. The passage of charged molecules through ion channels in the cell membrane endows the membrane with a critical electrical conductive property allowing for inward and outward current flows.(Aidley and Stanfield, 1996). This is one factor that establishes electrical circuits within biological tissues.

More Membrane Electrodynamics

Based on forthcoming information in this chapter, it is reasonable to suggest a spiral or coiled design of these transmembrane protein molecules. This is consistent with the design of other protein members of the liquid crystal cytoskeleton. Moreover, such a design would energize the movement of charged elements such as transiting ions.

In order to maintain electrolyte balance in intracellular fluid (ICF), water, sodium, and potassium are in constant motion between the intracellular and extracellular compartments.(Edwards 1998) Extracellular fluid (ECF) and ICF contains different concentrations of minerals. Minerals carrying positive charges are called *cations*. In order to maintain electric neutrality, negatively charged molecules called *anions* must match these cations in concentration. Sodium is the main cation of ECF, whereas potassium is the major cation of ICF. Chloride and bicarbonate are the

main anions of ECF, while proteins and organic phosphates are the main anions of ICF. Uncharged molecules such as glucose or urea are also present in both compartments and contribute to the osmotic gradients or flow of liquids and solids between the ECF and ICF.(Edwards, 1998)

As discussed at the end of Chapter 5, the passage of electrically charged ions through a membrane will create a flow of electric currents through the membrane. These ions, in turn, will affect the metabolism of the cell and the potential of the cell membrane.

All body cells, thus, carry a weak electric current flowing through them. These resonate with bioelectrical circuits energizing the entire organism.(Stanish, 1985)

Overall mineral, water, and membrane changes in cancerous tissues play important roles in changing the cellular geometry, metabolic biochemistry, and electrical properties of cancer cells.

Dr. Keith Brewer reported that intracellular calcium and magnesium concentrations were lowered in cancer cells due to impaired membrane transport.(Brewer, 1985) According to Brewer, the transport of substances across the cell membrane is controlled by: the electrical properties of the chemical bonds on and in the membrane, the electrical gradient across the membrane, and the electrical attractions between positively charged cations and polar molecules with positive and negative regions.(Brewer and Passwater, 1976)

Earlier we referred to F.W. Cope who described a characteristic pattern of electrolyte and fluid abnormalities that occur in any tissue that is damaged. He calls this pattern the “tissue damage syndrome.” When cells are injured from any cause, cells will lose potassium, and accumulate sodium and water.(Cope, 1978)

Advanced research by Cope showed that proteins of a healthy cell exist in a normal electronic configuration state where a significant portion of cell water is structured or bound in concentric

rings around these protein molecules. In addition, when the proteins are in their healthy configuration, the negatively charged sites on the protein matrix have a greater preference for association with potassium rather than with sodium .(Cope, 1978) If these findings are accurate, this may be one of the factors that accounts for the finding that healthy cells have high cell potassium and low intracellular sodium concentrations.

Having also referred to transmembrane proteins, these consist of linear chains of amino acid residues with attached carbohydrate and/or lipid molecules. The electro attractive and repulsive forces between these components, and the external or internal saltwater environment, cause these proteins to fold into three-dimensional shapes called *conformational states*. *Protein function is dependent on these conformational states*. The cell membrane and its associated membrane proteins are dynamically active with the associated proteins undergoing continuous changes in shape and bioelectric activity. *In proteins that are enzymes the conformational state determines whether or not the enzyme will expose its ligand binding sites to catalyze metabolic reactions.*

If the membrane protein is an ion channel the conformational structure will determine whether the channel is open or closed. When the channel is open, it is able to pass ions such as potassium, sodium, chloride, and calcium, across the cell membrane.(Hille, 1992)

Moreover, the ability of the cell proteins to stay in their normal configurational state depends on the cell being free from chemical, physical, or hypoxic damage. When physical, chemical, or hypoxic damage occurs to a cell, many cell proteins will change to an abnormal or damaged configurational state. In that pathological state “the cell proteins lose their preference for association with potassium rather than sodium, and lose much of their ability to structure water.”(Cope, 1978)

Water also transforms its electro-capacitance along with its structured form by flowing through spiraling vortices. It main-

tains its structured form as a result of electromagnetic capacitance related to its therapeutic capacitance. (Lorenzen and Horowitz, 1999) In addition, as the water content and the percentage of unbound water within cells increase, the cells swell. (Ling and Ochsenfeld, 1976) These changes alter their transmembrane ionic and electrical gradients. When these protein intoxication changes occur, potassium leaves the cell and is replaced by sodium. (See additional details in figure 7.1.)

Membrane Water Structuring

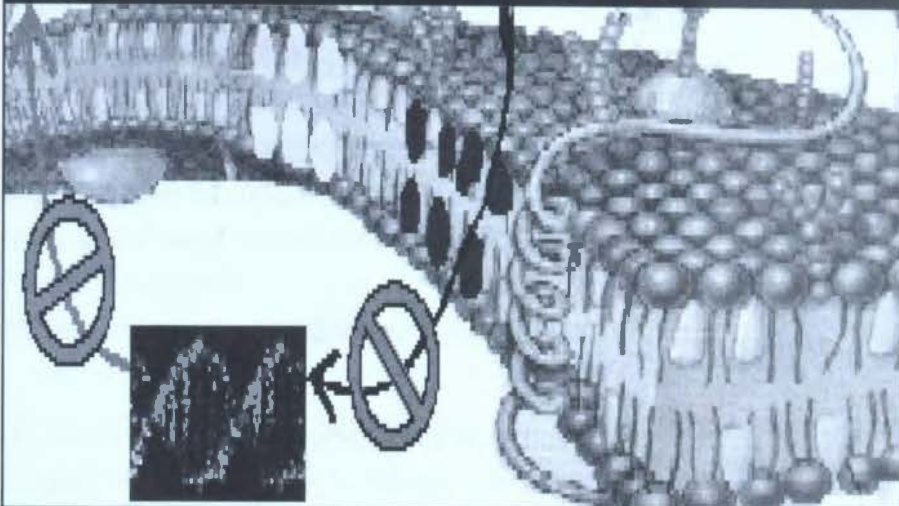
Proteins can also be induced to resume their normal configuration by measures that increase the intracellular concentration of potassium, magnesium, and ATP. This alone, interesting enough, will result in cell water becoming more structured, and will cause the cell to release unstructured cell water and sodium. (Cope, 1978) Besides this, magnesium is also involved in maintaining the intracellular concentration of potassium.

Dr. Horowitz has theorized that the structuring of water in this way may depend on the ATP more than the elements potassium or magnesium. The ATP carries an electron charge with related frequencies that may help direct the form of water structuring.

The structuring of water around intracellular proteins will also affect the configurational state, liquid crystal state, and electrical properties of these proteins. (Figure 7.2. explains more about liquid crystals including their influence on DNA expression.) Structured or bound water has less freedom of movement than unbound water.

Nuclear magnetic resonance (NMR) can be used to measure the amount of water that is structured in normal versus cancerous cells. Hazelwood and his colleagues showed in a 1974 NMR study that malignant tissues have significantly increased amounts of unbound water compared to normal tissues. (Hazelwood, 1984)

Fig. 7.1. DNA/Membrane Electrocommunications



So far we have established that cell membranes have an electronic character and cancer cells have dysfunctional cell membranes. Healthy cells of the body do not operate in isolation. They are continuously communicating with other cells. Cancer cells, however, lose their ability to communicate with other cells and regulate their growth independently in response to this failed communication including energetic dissonance.

Dr. Merrill Garnett has advanced the understanding that an alternating current oscillating circuit exists inside of cells between the cell membrane and the DNA. This energy is conducted over electronic liquid crystal (LC) protein polymers inside the cell. This circuit is activated during differentiation to trigger the expression of genes. (Garnett et al., 2002) Garnett's findings appear to show that *cells use their electrical properties to moderate gene expression!* As part of his evidence, Dr. Garnett has reported that normal cell development requires normal energy flows.

Electrical charges stored in the cell membrane (capacitance), and electrical charges of oxygen free radicals, are normally transferred to DNA and are involved in DNA activation and the creation of an electrical field around DNA. DNA is very effective in transferring large amounts of electrical charge along its long axis. (Garnett, 1998) In fact new research shows that DNA molecules may be good molecular semiconductors. (Li and Yan, 2001)

An electrical pathway from the cell membrane to DNA is a natural pathway related to development in cells that use aerobic mechanisms with ATP production. (Garnett, 1998) As a corollary, this natural electrical pathway is *transiently disrupted* in healthy cells while they are involved in wound healing, and permanently disrupted in cancer cells that rely on anaerobic glycolysis for energy production.

These changes in the degree to which water is structured in a cell or in the ECM will affect the configurations and liquid crystal properties of proteins, cell membranes, organelle membranes, and DNA. Healthy tissues simply have more structured water than unhealthy tissues. Clinicians who recognize this fact have found that certain types of music, toning, chanting, tuning forks, singing bowls, magnetic waters, certain types of frequency generators, phototherapy and spectrochrometry treatments, and homeopathics, correctly used, can enhance water structuring in your tissues and subsequently improve health.

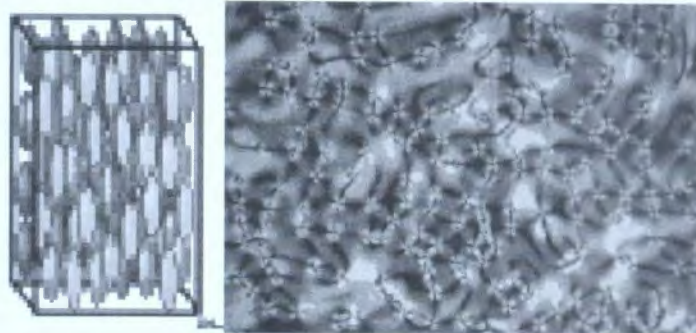
Cancerous Conditions

At any given moment, everyone maintains numerous cancer cells. A number of features such as changes in the mineral concentrations inside of these cell, the degree that water is structured therein, and an excess of negative electrical charges on their exterior surfaces, cause the cell membrane potential of these cancerous cells to be less than normal.(Cone, 1970)

As previously mentioned, cancerous tissues, and less differentiated regenerating tissues, are more electronegative than normal cells and tissues.(Ambrose et al., 1969; Schaubel et al., 1970; Becker, 1985) As a result of increased intracellular sodium, cancer cells will retain more water causing them to be more spherical and have different geometry than normal cells. When cells become swollen with too much water, normal cell signaling mechanisms are disrupted, aerobic cellular metabolism of sugars is inhibited, and ATP energy production falls.

Researchers now believe that genetic mitosis is partly regulated by intracellular sodium levels. Investigators have postulated that an adverse intracellular sodium/potassium ratio affects the transmembrane potential of malignant cells and predisposes to malignant mitogenesis.(Cone, 1975; Regelson, 1980; Haltiwanger, 2002)

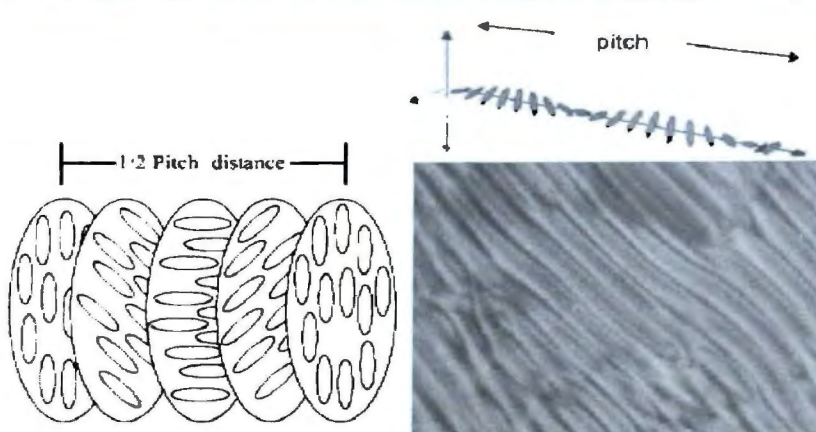
Fig. 7.2. Diagrams of Liquid Crystal Phases



Nematic Phases



Smectic Phases



Cholesteric Phases

Liquid crystal research began in 1888 with Friedrich Reinitzer, an Austrian botanist. Subsequent research determined that liquid crystal materials have common characteristics including: a rodlike molecular structure, rigidity of the long axis, strong dipoles and/or easily polarizable substituents, and spiraled designs.

Liquid crystalline molecules (mesogens) point along a common axis, called the *director*. This is in contrast to molecules in the liquid phase which have no intrinsic order. In the solid state, molecules are highly ordered and have little translational freedom.

"It is sometimes difficult to determine whether a material is in a crystal or liquid crystal state. Crystalline materials demonstrate long range periodic order in three dimensions. By definition, an *isotropic liquid* has no orientational order. Substances that aren't as ordered as a solid, yet have some degree of alignment are properly called *liquid crystals*." Thus, liquid crystalline structures are described using: 1) *positional order*, 2) *orientational order* and 3) *bond orientational order*. "Positional order refers to the extent to which an average molecule, or group of molecules, shows translational symmetry (as crystalline material shows). Orientational order... represents a measure of the tendency of the molecules to align along the director on a long-range basis. Bond orientational order describes a line joining the centers of nearest-neighbor molecules without requiring a regular spacing along that line.

Most liquid crystal compounds exhibit polymorphism,...where more than one phase is observed. Distinct phases of matter are observed between the crystalline (solid) state, "mesophases," and isotropic (liquid) states. Liquid crystal types depend on the amount of order in the material including: 1) Nematic Phases wherein the liquid crystal is characterized by molecules that have no positional order but tend to point in the same direction (along the *director*). Liquid crystals are *anisotropic* materials with varying physical properties depending on the average alignment with the director. If the alignment is large, the material is very anisotropic. Similarly, if the alignment is small, the material is almost *isotropic*. A special class of nematic liquid crystals is called *chiral nematic*. Chiral refers to the unique ability to selectively reflect one component of circularly polarized light. The term chiral nematic is used interchangeably with cholesteric. 2) Smectic (i.e., "slippery") phases show molecular translational order not present in the nematic. In the smectic state, molecules maintain general orientational order, but also tend to align themselves in layers or planes. Motion is restricted within these planes, and separate planes are observed to flow past each other. The increased order means that the smectic state is more "solid-like" than the nematic.

As many as 12 smectic phase variations have been identified. Some of these share organizational characteristics with DNA. In the smectic-B mesophase, for instance, molecules are arranged into a network of hexagons within layers. In the smectic-C mesophase, molecules are tilted from layer to layer forming a helix. This coiling apparently plays a role in electro-conductivity, light and energy field transmissions. Cholesteric phases, also called chiral nematic liquid crystals, also produce intermolecular forces. In these DNA-like structures, the directors actually form in a continuous helical pattern. The "pitch" of these structures are defined as the distance it takes for the director to rotate one full turn in the helix.

"A by-product of the helical structure of the chiral nematic phase, is its ability to selectively reflect light of wavelengths equal to the pitch length, so that a color will be reflected when the pitch is equal to the corresponding wavelength of light in the visible spectrum. The effect is based on the temperature dependence of the gradual change in director orientation between successive layers of pitch, by increasing the temperature of the molecules, hence giving them more thermal energy....

[Industrially,] various types of these liquid crystals are often used to create sensors with a wide variety of responses to temperature change. Such sensors are used for thermometers often in the form of heat sensitive films to detect flaws in circuit board connections, fluid flow patterns, condition of batteries, the presence of radiation, or in novelties such as "mood" rings.

Another type of liquid crystal (i.e., Columnar Phases) is characterized by stacked columns of molecules. The columns are packed together to form a two-dimensional crystalline array."

DNA itself demonstrates several liquid crystal types and functions.

See: Davidson and Rill, "Multiple liquid crystal phases of DNA at high concentrations" at <http://micro.magnet.fsu.edu/publications/pages/nature.html> and also, <http://www.iq.usp.br/wwwdocentes/mralcant/AboutLC.html>.

Interdependent Risk Factors in Gene-Controlled Malignant Transformation

Risk factors for gene-controlled malignancies include hypoxia and low cellular pH. These factors can affect: gene expression, genetic stability, genetic repair, protein structures, protein activity, intracellular mineral concentrations, and types of metabolic pathways used for energy production.

Cancerous tumors are composed of cell populations that range from highly aggressive undifferentiated cells to well differentiated cells. In general, tumors with highly undifferentiated cells are more invasive than tumors composed of well-differentiated cells or tumors with mixed cell populations. Some cancers are almost completely composed of undifferentiated cells that are biochemically similar to embryonic cells. This is largely due to increased expression of embryonic genes. Highly undifferentiated tumors typically produce gene products such as proteins like alpha-fetoprotein (AFP) and carcinoembryonic antigen (CEA), and enzymes and hormones such as human chorionic gonadotropin (hCG) that are characteristic of embryonic tissues. On the other hand, tumors with well-differentiated cells will produce gene products more closely resembling normal adult tissues.

Increased malignant behavior during tumor growth is also affected by the microenvironment of tumors, which besides being characterized by areas of both acute and chronic hypoxia and low pH, is deprived of nutrients and is electrochemically altered.(Moulder et al., 1987; Rockwell, 1992)

Oxygen Reduction and Carcinogenesis

The severity of hypoxia and acidosis in tumors can affect tumor cell invasiveness, metastasis, risk of recurrence, and resistance to chemo and radiation therapies.(Teicher, 1994; Rofstad, 2000)

Tumors exist in a dynamic state of competition for survival wherein oxygen delivers life energy. To conquer healthy terrain, tumors continually secrete growth factors that initiate the formation of new blood vessels to feed on oxygen for their continued expansion. Yet, some tumors grow so rapidly that they out grow their blood supply, large tumors often have areas that are poorly oxygenated (hypoxic) and other areas that are well oxygenated.(Vaupel et al., 1991) Hypoxic and well-oxygenated areas may fluctuate coming and going as blood vessels form and then regress.(Holash et al., 1999)

Tumors with areas of mixed oxygenation will often contain heterogeneous groups of cells that exhibit biochemical diversity. The same tumor will have some cells that are utilizing different metabolic reactions to create energy than other groups of cells in the same tumor. This is one reason why different cell populations in the same tumor will respond differently to treatment measures. Some cells will be killed by some treatments while other cells will survive and in a sense be selected for further growth.(Gray et al., 1953; Graeber et al., 1996)

Fluctuating oxygen levels will result in fluctuations in the types of genes that are activated, types of proteins (e.g., enzymes) that are produced, and the types of metabolic reactions that occur.(Dang et al., 1997) Fluctuations in the types of metabolic reactions used to create energy will result in variations in lactic acid production, acid excretion, and acid accumulation, both within cells and within the ECM.

Earlier we explained the concept of electrical cloaking by tumor cells against immune defense cells. If you have ever wondered why tumor cells resist host immune defenses, consider this also. In vitro studies have shown that tumor cell surface adhesion molecules are electrochemically “down regulated” upon exposure to hypoxia conditions.(Hasan et al., 1998). This means that hypoxia can result in decreased cell adhesion of tumor cells to the ECM. Loss of contact with the ECM permits tumor cells to

spread to more distant locations, and reduces the ability of the ECM to exert growth inhibition. It also reinforces the concept of cancers developing an electrochemical barrier to immune attack.

Some researchers have focused on the finding that the hypoxic and acidic microenvironment of tumors will create further genetic instability and mutations.(Reynolds et al., 1996) Hypoxia and acidic tumor microenvironments will cause certain genes to become activated and expressed, while other genes may become inactivated so that the metabolic reactions within tumor cells will be altered. These conditions can also create DNA damage and impair DNA electrochemical repair mechanisms.(Yuan et al., 1998, 2000) For example, low intracellular pH has been shown to alter the conformational structure and function of cellular proteins, including DNA polymerases.(Eckert and Kunkel, 1993) These enzymes play a major role in protein synthesis and cellular repair.

One common characteristic of many tumors is the reduced activity of a special protein called p53 that is involved in triggering cell death. Hypoxic conditions will favor selection of immortalized tumor cells with reduced apoptotic (i.e., planned cell death) potential.(Graeber et al., 1999)

As previously introduced, hypoxic tumor cells often lack enough oxygen to activate their aerobic metabolic pathways to supply their energy needs.(Rossi-Fanelli et al., 1991) Tumor cells in hypoxic conditions will, thus, convert most of their pyruvate to lactate instead of to acetyl Coenzyme A.(Warburg, 1956) This type of energy production is very inefficient; so *tumors require much larger amounts of sugar in order to maintain their energy production*. Tumor cells, in a sense, become sugar junkies. This fact alone can have profound implications for nutritional therapy and cancer reversals.

Cancer Cells and Sugar Energetics

Tumor cells express several adaptations in order to sustain their sugar addiction and metabolic strategies to address this aberration. Tumor cells develop larger numbers of glucose receptors and transporters on their cell surfaces in order to increase their sugar uptake.(Van Winkle, 1999)

Given this increased sugar dependence of cancer cells, it is appalling the health-enhancing natural sweetener (i.e., sugar substitute) *stevia* has become increasingly regulated in recent years while carcinogenic, and otherwise toxic, artificial sweeteners have been increasingly endorsed by chemicalpharmaceutical and cancer industry profiteers in association with government regulatory agencies including the FDA.

Another fact is, hypoxia stimulates the transcription of numerous genes, including genes that code for enzymes of the glycolytic pathway and cell membrane glucose transport proteins—GLUT-1 and GLUT-3. Using this knowledge as a basis for therapy, the administration of cesium salts has been reported to limit tumor cell uptake of glucose, which starves cancer cells and reduces their ability to make energy by fermentation.(Semenza, 2002)

When it was first discovered that tumors mostly use anaerobic metabolism of glucose—two simple sugar molecules (i.e., sucrose)—it was thought that providing more oxygen would convert tumors back to aerobic metabolism.(Warburg, 1930) Unfortunately, after doing this, tumors still exhibited high levels of glycolysis.(Weinhouse, 1976).

Here is more beneficial therapeutic advice. Tumor cells also increase their activity of the intracellular enzyme called *glucokinase*. This enzyme sequesters sugar inside of the cell.(Board et al., 1995) An extract of avocado called *mannoheptulose* may be helpful. It has been found to inhibit glucose entry into tumor cells and reduce the activity of this glucokinase. So if you want to help starve cancers, eat organic avocados!

Fig. 7.3. Cell Membrane Treatments in Cancer



Normalizing the electrical potential of cell membranes through directed mineral therapy can be used to increase the abnormally low transmembrane potential of cancer cells and injured tissues. Effects that are seen when membrane potential is increased include: enhanced cellular energy (ATP) production, increased oxygen uptake, changes in entry of calcium, movement of sodium out of the cells, movement of potassium into the cells, changes in enzyme and biochemical activity, and changes in cellular pH.

2-AEP (2-aminoethylphosphoric acid) mineral transporters enhance cell membrane capacitance in several ways. First by repairing damaged cell membranes and second by effectively delivering minerals to the outer surface of cell membranes.

The orotate, aspartate, and arginate mineral transporters are advanced mineral delivery systems that effectively deliver minerals into the interior of cells. Mineral delivery into the cell interior is important because many of the cell's cytoplasmic and mitochondrial enzymes require minerals in order to be activated.

Cancer cell membranes also have altered lipid/sterol content.(Revici, 1961) In addition, the types of glycoproteins and antigens that they express are different.(Warren et al., 1972; Hakomori, 1990)

The lipid/sterol composition of cell membranes also affects membrane fluidity. Fluidity is abnormal in cancer cells and is increased to its highest level during cell division. Normalization of membrane fluidity (membrane repair) can decrease the growth of tumors. Magnesium arginate, the amino acid taurine, vitamin C, vitamin A, and beta carotene all have been shown to help normalize membrane fluidity and membrane potential in cancer cells. Cell membrane repair can also be initiated by using lipid and sterol compounds such as 2-AEP, essential fatty acids, sterols, and phytosterols.

Some tumor cells express glycoproteins that promote protein breakdown and, from this, sugar production.(Stipanuk, 2000) How is this possible? Through the secretion of enzymes called *cytokines*, especially *tumor necrosis factor*, which increases in cancer. Some of these cytokines increase the breakdown of normal tissue proteins.(Bender, 2002) The amino acids released by protein breakdown can then be used in gluconeogenesis (i.e., new sugar production). Thus, tumor necrosis factor not only promotes protein breakdown, and with this the destruction of normal tissues, but it also increases gluconeogenesis for cancers' sugar addiction.(Bender, 2002)

Many tumor cells will produce lactate when they metabolize glucose anaerobically. The lactate is exported from the tumor cells and then utilized by the liver, here again, for gluconeogenesis.(Bender, 2002) In this way, even more sugar for tumor growth is produced.

Overall gluconeogenesis is stimulated when cancer is present. Gluconeogenesis requires a great deal of energy. For this reason, excessive gluconeogenesis is thought to be a significant factor that contributes to the wasting syndrome that accompanies cancer called *cachexia*.(Gold, 1968)

In the 1960s, this condition was effectively treated by Dr. Joseph Gold, a well known New York oncologist whose work with hydrazine sulfate received international respect. Even then, cancer industry cohorts at the National Cancer Institute (NCI) officially condemned Dr. Gold's contributions. A U.S. General Accounting Office inquiry, prompted by a congressional investigation, cited the NCI for this gross injustice favoring only cancer profiteers. Thereafter, scientifically vindicated yet politically compromised, Dr. Gold continued to advance metabolic strategies that inhibited the enzyme phosphoenol pyruvate carboxykinase (PEP-CK) based on his finding that this would reduce gluconeogenesis in malignancies, and decrease the severity of cachexia.(Gold, 1968; 1974, 1981)

Tumor Acidification and Related Therapies

One of the characteristic features of cancers is that cancerous cells rapidly divide and proliferate. In general, growing cancers versus normal tissues have many more cells undergoing mitosis. According to Keith Brewer, normal and malignant cells undergo mitosis between a pH range of 6.5-7.5, and the mitosis rate slows as the intracellular pH approaches the extremes of this range. If a cell can be forced into a pH outside of this range, cell division ceases. (Brewer, 1985) Recognizing this fact serves as an additional basis for cancer control strategies that involve increasing or decreasing the pH of tumor cells.

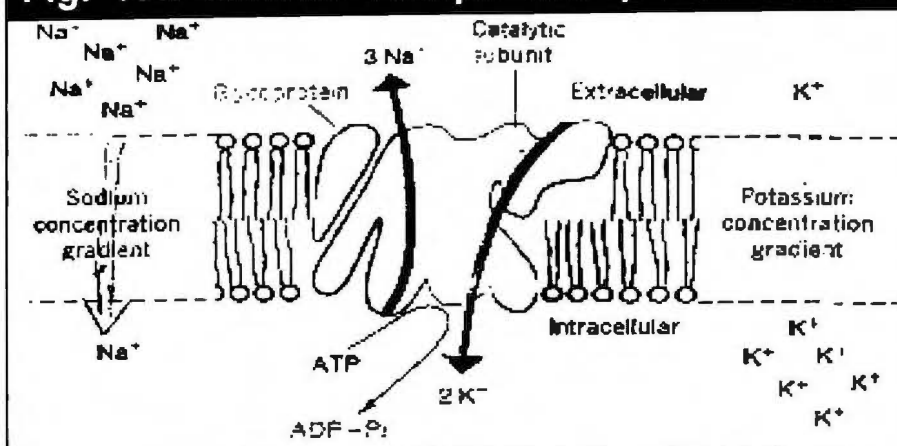
Increasing body alkalinity to the higher side of normal (i.e., 7.3 to 7.5 pH) has been highly recommended by advanced oncologists and health practitioners.

Because glycolytic metabolism predominates in tumors, some lactic acid accumulation and intracellular acidification may occur in tumors under hypoxic conditions although most of the lactic acid and hydrogen ions are exported into the ECM leading to acidification of the ECM. (Ojugo et al., 1999) Thus, the extracellular pH around tumor tissues is usually more acidic than the extracellular pH of normal tissues. Extracellular pH levels as low as 7.09 have been measured in some human tumors. (Van der Zee et al., 1989) It is thought that both lactate and hydrogen protons are exported from tumor cells into the extracellular space as a way of limiting intracellular acidity. (Ojugo et al., 1999)

This theory makes complete sense, as it is reinforced by the finding that tumor cells efficiently sequester and export acids. By so doing, they are often able to maintain their cytoplasmic pH nearly equal to that of normal cells. That is, between 7.0-7.3 pH. (Newell et al., 1993; Stubbs et al., 1994)

Intracellular cytoplasmic pH is maintained in tumor cells by sequestering excess acids in cytoplasmic vesicles, and through

Fig. 7.4. Mineral Pumps and pH in Cancer



Mineral pumps in cell membranes help control mineral concentrations and pH inside and outside of cells. Movement of Na^+ and K^+ cations through cell membranes create electric currents in, and just above, the membranes in the glycocalyx-water-membrane interface. The Na/K membrane pump uses ATP created by mitochondrial oxidation of food. 1/3 of ATP energy produced by your body is needed to run these pumps and generators simply to maintain the location of these two minerals in balance with magnesium and potassium.

But these pumps can fail with hypoxia, injury, and cancer. In these conditions potassium and magnesium will leak out of cells and sodium and water will leak into cells. Cells' energetic mechanisms and mineral pumps subsequently fail leading to general metabolic disturbances. (Cone, 1975; Cope, 1978; Seeger and Wolz, 1990; Cure, 1991, 1995; Webb et al., 1999;)

Mineral transporters that effectively deliver minerals into cells help address these issues. In order to transport potassium and magnesium ions into sick cells to support mitochondrial production of ATP, reactivate mineral pumps, and correct cellular acidosis, these cations should be bound to carrier molecules that can penetrate the cell membrane without disrupting the membrane charge. K^+ and Mg^{2+} mineral transporters such as Pot-mag aspartate, magnesium arginate, and potassium arginate, place K^+ and Mg^{2+} ions on the inner surfaces of cell membranes. This assists in optimizing the action of Magnesium-dependent ATPase enzymes that are located on the inner surface of the cell membrane. These enzymes, thus, maintain the normal concentration of potassium in the cell removing 3 sodium ions for every 2 potassium ions that are brought in. These adjustments also help normalize Krebs's cycle magnesium and potassium dependent enzymes, ATP, and glucose entry into cells and acid flow out of your cells. Courtesy of Dr. Haltiwanger and http://www.du.edu/~kinnamon/3640/memb_pot_1.html.

cell membrane mechanisms that include a sodium hydrogen ion exchanger.

Dr. Haltiwanger has theorized that the buildup of intracellular acids in cytoplasmic vesicles may interfere with mitochondrial production of ATP. The proposed mechanism for this lies in disrupting the hydrogen ion gradient across the mitochondrial membrane. This would create a positive feedback loop where anaerobic glycolysis creates an intracellular acidic condition that further interferes with oxygen-mediated electron transport in the mitochondria. Therefore, in order to maintain energy, anaerobic glycolysis would be selected electrochemically by tumor cells.

Theory-based cancer control has been performed by tumor hyperacidification. Manfred von Ardenne of Germany was one of the pioneers who, back in the 1960s, began to develop a cancer treatment using intravenous glucose to create increased levels of tumor acidity. He used hyperthermia to kill cancer cells that were already compromised by excessive acidity.(von Ardenne, 1994) Mixed results have been reported since chemotherapies have been used to block the movement of lactate and hydrogen protons from tumor cells. This increased cellular acidification, but failed overall to cure cancers.

In one study, the bioflavonoid quercetin was found to inhibit the synthesis of heat shock proteins in tumors and to block the export of lactate from tumors creating tumor-toxic levels of intracellular acidity.(Kim et al, 1984) Consequently, the use of quercetin as a cancer treatment became the subject of several patents. Unfortunately, this treatment was proven effective only in the hypoxic portion of tumors. It is generally ineffective in tumors, and areas of tumors, that are not hypoxic. Use of quercetin, it was learned, was most effective when hyperthermic treatments were used concurrently.

Related approaches to cancer treatment have involved the creation of hyperglycemia (i.e., high blood sugar) and/or hyperthermia. The former was shown to deliver intracellular acidification. A number of researchers have reported on the use of

oral and intravenous glucose as a way to increase tumor acidity with limited efficacy.(Volk et al., 1993; Leeper et al., 1998) Researchers have also shown that extracellular acidification of tumors will enhance the effect of hyperthermia (Gerweck, 1977; Wike-Hooley, 1984; van de Merwe et al, 1993) and inhibit the development of thermotolerance in cultured tumor cells.(Goldin and Leeper, 1981)

Recently, cancer researchers have continued to study the use of both intracellular and extracellular acidification of tumors to enhance the cytotoxic effects of chemotherapeutic agents.(Atema et al., 1993; Skarsgard et al., 1995; Kuin et al., 1999)

Tumor Alkalization and Cesium

Tumor alkalization has also been an area of cancer research and chemotherapeutics. Cesium, for instance, is a naturally occurring alkaline element that was promoted for use in cancer by a scientist named Keith Brewer. Cesium is preferentially taken up by tumor cells.(Brewer, 1985) Use of cesium is thought to reduce the cellular uptake of glucose by cancer cells leading to starvation of the malignancy. Cesium also was reported by Brewer to raise the cell pH of cancer cells up to a lethal range of 8.0.

Use of cesium in this way has, however, met with mixed results.(Sartori, 1984) Dr. Haltiwanger cautioned those tempted to use this treatment to read extensively about cesium before proceeding due to its limitations and potential side effects.(Haltiwanger, 2002)

Potassium and Cancer Therapeutics

Recall that the accumulation of positively charged hydrogen cations inside of cancer cells through either respiratory or metabolic acidosis will shift potassium out of the cells leading to higher than normal levels of potassium in the bloodstream (hyperkalemia), lower than normal potassium intracellularly, and increased potassium loss through the kidneys.

One researcher, Dr. Gilbert Ling, developed a unique theory regarding the mechanisms used in potassium regulation with therapeutic implications for cancer.(Ling, 2001) He published that the membrane pump theory is wrong. Alternatively, he advanced an *association-induction (AI) hypothesis* which includes the idea that ATP bonding to intracellular proteins mediates selective and preferential absorption of potassium over sodium.(Ling, 2001) Dr. Ling's work is highly technical, but very informative.

Most authorities agree that movement of potassium out from a cell's interior is regulated by acidity of the cell interior; the permeability of the cell membrane, and chemical and electrical gradients to the potassium ions.

When cancer cells export hydrogen ions, the ECF space becomes more acidic. The amount of acids produced by cancer cells may even be severe enough to overwhelm the body's homeostatic pH regulatory mechanisms.

The cell cytoplasm of malignant cells may or may not be acidic depending on how efficient tumor cells are in sequestering and exporting acids, but the ECM around tumors is typically acidic. By definition, acidic tissues are electron deficient. So a tumor may have areas that have a relative state of electron deficiency. This condition of electron deficiency may help explain why measures that increase electron availability, like magnetized waters, lemon juice, negative ion generators, standing by water falls, standing by the ocean surf, use of electron rich antioxidants, consumption of electron dense foods (fresh vegetables and vegetable juices and essential fatty acids like fresh flax oil), help some people with chronic degenerative conditions and cancers. Clinicians widely know that many chronic degenerative conditions are most often associated with tissue acidity.

Awareness of such findings gives credence to nutritional approaches to cancer such as the dietary program advocated by the famous Dr. Max B. Gerson. During his lengthy medical career, Dr. Gerson advocated low sodium intake and high potassium supplementation through use of raw vegetable juices and potassium supplementation.(Cope, 1978; Ling, 1983).

Variables on Cancer Cell Surfaces: Implications for Immunity

Building on earlier discussions, human chorionic gonadotropin (hCG), a natural female pregnancy hormone, sialic acid, as well as negatively charged residues of RNA, give tumor cells a strong negative charge on their cell surface.

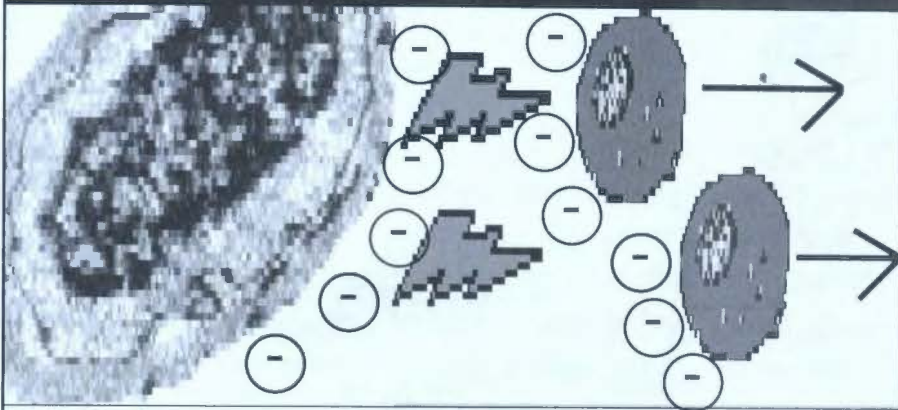
Regarding cancer cell membranes and electrochemistry, as mentioned, all cells have cell surface glycoproteins. As cells specialize, they develop unique sets of cell surface glycoproteins that allow cells of the same type to recognize, communicate, and adhere to each other.(Reichart, 1999)

These cell surface glycoproteins contain varying concentrations of sialic acid, which is one of the primary molecules responsible for conferring a negative charge to the cell surface of all cells.(Cure, 1995; Acevedo et al., 1998) The chemical characteristics of hCG make it a sialoglycoprotein, that is, much like the sialic acid glycoprotein compound.(Acevedo, 2002)

It has been repeatedly proposed that the presence of hCG on the surface of cancer cells is a universal marker for cancer.(Acevedo et al., 1995; Acevedo, 2002) According to Dr. Acevedo malignant transformation will cause the genes that code for hCG to become activated causing cancer cells to begin producing this hormone.(Acevedo, 2002) When cancer cells secrete this hormone it collects on the cell surface. Since hCG contains large amounts of sialic acid this results in cancer cells having a stronger cell surface negative charge than normal cells.(Acevedo et al., 1998)

Dr. Cure presented data that cancer cells are also coated by negatively charged residues of RNA, which is another contributing factor to the strong cell surface negative charge of cancer cells.(Cure, 1991, 1995) He also presented data that suggested bacteria can secrete compounds that increase the negative charge of cells to which they are attached, or bacteria and viruses can cause cells that they infect to secrete compounds that increase the negative charge of the cells.

Fig. 7.5. Electrodynamics of Cancer “Stealthing”



Cell surface glycoproteins contain varying concentrations of *sialic acid*, which is one of the primary molecules responsible for conferring a negative charge to the cell surface of all cells.(Cure, 1995; Acevedo et al., 1998). The chemical characteristics of hCG helps turn sialic acid into a sialoglycoprotein which is a cancer risk.(Acevedo, 2002)

Because immune defense cells, such as natural killer (NK) cells and macrophages, also have a negative surface charge these cells are repulsed by the strong negative electrical field of the sialoglycoprotein on cancer cells when they try to approach and *terminate* them.(Van Rinsum et al., 1986; Cure, 1995; Acevedo et al., 1998) Negatively charged hCG is also present on the cell membranes of embryonic and fetal cells, sperm cells, and all cancer cells regardless of type or origin. This membrane-associated hCG make all these cells immunologically stealthed.

Human chorionic gonadotropin (hCG), a hormone usually associated with pregnancy, can be found on the surface of all cancer cells and in some reportedly contaminated vaccines. Dr. Acevedo has proposed that the presence of hCG on the surface of cancer cells is a universal marker for cancer.(Acevedo et al., 1995; Acevedo, 2002)

According to Dr. Acevedo, malignant transformation will cause the genes that code for hCG to become activated causing cancer cells to begin producing more of this hormone.(Acevedo, 1998; 2002) When cancer cells secrete this hormone it collects on the cell surface resulting in cancer cells having a stronger cell surface negative charge than normal cells. The surface negatively repels immune cells.

Membrane degeneration also occurs in the initial phase of carcinogenesis first in the external cell membrane and then in the inner mitochondrial membrane. Thus affected, membranes become more permeable to water-soluble substances. Potassium, magnesium, and calcium migrate from the cells and sodium and water accumulate in the cell interior. All of this affects the electrical properties of cells and contributes to electrical “cloaking,” immunological “stealth-ing,” and ill health.(Seeger and Wolz, 1990)

Because immune defense cells such as natural killer (NK) cells and macrophages (meaning “big eaters”) also have a negative charge, these cells are repulsed by the strong negative electrical field of cancer cells when they try to approach these cells. (Van Rinsum et al., 1986; Cure, 1995; Acevedo et al., 1998). According to Dr. Acevedo, “Since all the normal cells from our immune system—macrophages, NK cells, and B cells, express in their membranes a “normal” negative charge, the high negative charge of hCG and its subunits, demonstrated to be present in the cell membranes of embryonic and fetal cells, in sperm cells in every stage of development, and in all cancer cells irrespective of type or origin as membrane-associated hCG, make all these cells immunologically inert.” (Acevedo, et al., 1998)

In other words, your body’s premier defense mechanism against infectious diseases and cancers—the immune system—is restricted from approaching, and adhering to, cancer cells since negative charges repel. “That is the reason why the embryo and fetus, which under normal conditions are 50% foreign to the mother, are able to survive immune system attack by the mother, and why sperm cells and cancer cells also survive.” (Acevedo, 2002)

hCG in Contaminated Vaccines

Digressing for a moment from this focused science to this subject’s medical sociology, the following 1968 quote from internationally respected professor Paul Ehrlich, author of *The Population Bomb*, is noteworthy and relevant:

Our position requires that we take immediate action at home and promote effective action worldwide. We must have population control at home, hopefully through a system of incentives and penalties, but by compulsion if voluntary methods fail. . . . We can no longer afford merely to treat the symptoms of the cancer of population growth; the cancer itself must be cut out.”

As Dr. Horowitz reported in *Death in the Air: Globalism, Terrorism and Toxic Warfare*, on Friday, July 11, 1986, United Press International broke world news that the first human tests of an “anti-pregnancy vaccine,” developed by doctors at Ohio State University in Columbus, was about to take place in Australia. The experimental vaccine, the article said, “would act as a contraceptive by immunizing women against a hormone necessary to maintain pregnancy.”(UPI, 1996)

Dr. Vernon Stevens, Director of Reproductive Biology at Ohio State’s Department of Obstetrics and Gynecology, credited with the vaccine’s initial development, revealed that six years of pilot studies led to the 1980 development of the initial vaccine. He predicted that some form of the sterilizing preparation would reach the medical market by the mid-1990s.

The vaccine worked, the doctor explained, by attacking and neutering the female pregnancy hormone hCG. The pregnancy hormone, produced shortly after conception, facilitates placental development and the successful implantation of the fertilized egg into the uterine wall. Nothing was mentioned regarding hCG’s link to cancer cell production, membrane electronegativity, and immunological “cloaking.”

Vaccinating women with a foreign woman’s hCG, researchers learned, prompted a powerful immune response against the natural pregnancy hormone. The end results included sterility, terminated pregnancies, aborted fetuses, and according to the aforementioned data, a greater risk for cancer.

Promoted for its benefits to “family planning,” this “break-through” science represented one of the more coercive methods of population control heralded in the quote by Dr. Paul Ehrlich beginning this chapter. The deployment of this technology is also entirely consistent with the “practical” solutions for “dysgenic populations” advanced by the earliest eugenicists discussed in Chapter 4.

As reported by the Philippine Medical Association, in the mid-1990s, hundreds of thousands of unsuspecting women be-

gan receiving another “experimental” vaccine containing hCG. This time it was said to be for the prevention of tetanus. Later reports confirmed that millions of women in other countries besides the Philippines, including South American nations, Mexico, and America, received a similar hCG contaminated tetanus vaccine. The Philippine Department of Health revealed that almost 20 percent of tetanus vaccines they sampled were positive for the foreign hCG. They did not report on the possible links to increased cancer rates in these women.(HLI, 1995)

“This study lends credence to what Human Life International (HLI) and some other groups have suspected all along,” said Father Matthew Habiger, president of the international pro-life/family organization. “We first began to hear reports last year about tetanus vaccination campaigns in the developing world that targeted only women of childbearing or pre-child bearing years, and that they required multiple injections. The vaccination program is sponsored by the World Health Organization, an agency with a 20-year history of researching antifertility vaccines,” Fr. Habiger said. “We brought our suspicions to the world’s attention. This new study greatly heightens our concerns.”

The WHO, and feminist organizations that claimed to care about the health of women, publicly attacked HLI after it called for an investigation into the widespread allegations about the hCG contaminated vaccines.

The Philippine Medical Association (PMA) reported that nine of the 47 vaccine samples tested were found to contain hCG. They released a letter signed by the three Philippine physicians who actually tested the vaccines. The PMA president attested to the veracity of the letter and the testing process. All the vaccines sampled were taken from various health centers in Luzon and Mindanao. Almost all of them were labeled by one of two Canadian firms, Connaught (Aventis-Pasteur-Hoechst) or Intervax. All the samples were tested with an immunoassay-based method developed by the FDA.

The tetanus vaccine tested in the Philippines was imported, allegedly, as part of a program against neonatal tetanus sponsored by the WHO. Similar vaccination protocols have also been observed in WHO programs administered in Mexico and Nicaragua, the Philippine Medical Association reported. Tests of the vaccine in Mexico yielded similar results, but none of those tests were performed as part of an actual investigation into the hCG contamination.

“We view the adulteration of tetanus vaccine with hCG to be a matter of grave concern,” said Fr. Habiger. “It is absolutely essential that any country which has this program in place begin testing the vaccines for contamination.”

Fr. Habiger suggested that women who received tetanus vaccines be tested for the telltale presence of hCG antibodies in their bloodstream, and that the numbers of miscarriages experienced by vaccinated women be tabulated.

With the publication of this text, the same may now be said regarding cancers.

“We strongly suspect something is seriously amiss,” Fr. Habiger complained. “And public confidence in these kinds of vaccination campaigns has been critically eroded in several developing nations. Only an objective, scientifically valid, study of this matter will lay public concerns to rest.”

A parallel story, written by Suzanne M. Rini, entitled “Open Season on Humanity: Abortion, Contraception, Sterilization, and the Coming Era of Coercion,” appeared in the November, 1995 issue of *Celebrate Life*. Like many pro-life articles, this too recalled the major affiliations and conflicts of interest between some of the “Pirates of the Sacred Spiral,” and their successful efforts at what appears to be spreading cancer and sterility for population control. (Rini, 1995)

Closed Electrical Biological Circuits

If hCG induces cancer cell negativity and immunological suppression, then reversing these electrodynamics may be prudent prevention or cancer treatment. The application of electrical currents into cancerous tissue has been shown to have beneficial effects in many cases of cancer.

Applying electrodes directly to cancerous tissues, for example, Dr. Björn Nordenström and Dr. Rudolf Pekar pioneered research whereby special platinum needles (electrodes) were inserted directly into tumors.(Nordenström, 1983; Pekar, 1997) This form of therapy became known as *electrochemical therapy* because it destroyed portions of cancerous tumors by both electrical and chemical means.

In similar studies, needles were connected to electrical devices that produced direct current. Needles with a positive charge, anodes, and needles with a negative charge, cathodes produced electrical currents. When low voltage (6 to 8 volts) and low micro-amperage (40-80mA) direct currents were administered to tumors, areas around the anodes became highly acidic due to the attraction of negatively charged chloride ions and the formation of hydrochloric acid (pH 1-2). The tumor areas around the cathodes became highly basic (pH 12-14) due to the attraction of positively charged sodium ions and the formation of sodium hydroxide.(Yu-Ling, 1997) Chlorine gas emerged from the skin at entry points of the anodes, and hydrogen gas emerges from the entry points of the cathodes.(Chou et al., 1997) This strong change in pH was one of the factors involved in killing and injuring the tumor cells. So in a sense, direct current stimulation is a form of pH “chemotherapy.”

According to some investigators, the effectiveness of this type of treatment depends on electrode placement, and dosage of the electrical charge administered in coulombs.(Chou et al., 1997)

Dr. Yu-Ling reported at the Fourth International Symposium on Biologically Closed Electric Circuits that, by 1997, over seven thousand cases of malignant tumors had been treated in China by this treatment with favorable results.(Yu-Ling, 1997)

One of Nordenström's techniques was to place the positive electrode into the tumor and the negative electrode outside of the tumor.(O'Clock, 1997) This resulted in an increased flow of electrons into the tumor, a change in the electrical field around the tumor, and activation of membrane receptors and ion channels. O'Clock's work also confirmed Ross Adey's findings that windows of frequency and amplitude exist for tumor cell suppression and proliferation.(O'Clock, 1997)

Given the above, we believe that devices that create electromagnetic fields, and current flows in the body, may have therapeutic benefits vis-a-vis intracellular and extracellular pH.

Moreover, with chloride ions principally engaged in tumor-linked acidification, with cancer cells accumulating water, chlorinated water may be seen as an additional risk factor for intracellular acidification, and possible immunological "cloaking" of cancer cells.

Besides pH changes, the application of direct current to tumor cells has been found to change the membrane potential of tumor cells, alter nutrient uptake by tumor cells, reduce DNA production by tumor cells, and increase immune activity—particularly the attraction of white blood cells to the tumor site.(Chou et al., 1997; Douwes and Szasz, 1997; O'Clock, 1997)

The application of direct current causes electrolysis, electrophoresis, electroosmosis, and electroporation to occur in tissues creating microenvironmental chemical changes and microelectrical field changes.(Li et al., 1997)

The chemistry of the microenvironment of healthy cells, injured cells, cancerous cells, and the microelectrical field of these cells are interrelated. Changes in one results in changes in the other. This is easier to remember if you understand that all the chemistry of biological systems involves an exchange of energy.

Also, all your body cells and tissues are bioelectrically interconnected as a primary function of the Sacred Spiral.

These authors believe this type of electrical treatment of tumors will destroy some cells by electrolysis, and cause other cancer cells to lose their stealth-cloaking-coat of negatively-charged glycoproteins, thus enabling the immune system. Loss of this cloaking dynamic, through alterations in pathogenic electrochemistry, enables activation and docking of immune factors and cellular defenses. This includes production of cytokines and interferon and tumor destruction by cytotoxic T-cells and macrophages. As you will read in the next sections, this “cloaking” capability is hardly unique to cancer cells, but is also demonstrated by pathogenic bacteria and immune suppressive viruses that have been associated with malignancies.

Bacterial Electrodynamics in Cancer

An interesting phenomenon involves bacteria and viruses that can alter host cell membranes and is associated with certain types of cancer. In the 1950s, Virginia Livingston-Wheeler promoted the idea that cancers are associated with a particular type of *pleomorphic* bacteria. She named this microbe *Progenitor cryptocides* (Greek for “the hidden killer”) after she consistently isolated this germ from cancerous tissues. (Livingston-Wheeler and Wheeler, 1977; Livingston-Wheeler and Addeo, 1984; Cantwell, 1990)

Certain types of bacteria have been known to colonize areas of the body, particularly areas that have compromised blood supply and regional hypoxia. These bacteria naturally produce biofilms as a way of protecting themselves from immunological attack. For example, *pseudomonas* bacteria can produce a carbohydrate secretion within which they encapsulate themselves. (Straus et al., 1989) These negatively-charged cell coats electrically repulse attacking immune cells. By attaching themselves to human tissue, it is very likely that these bacteria are, likewise, using electrical defenses.

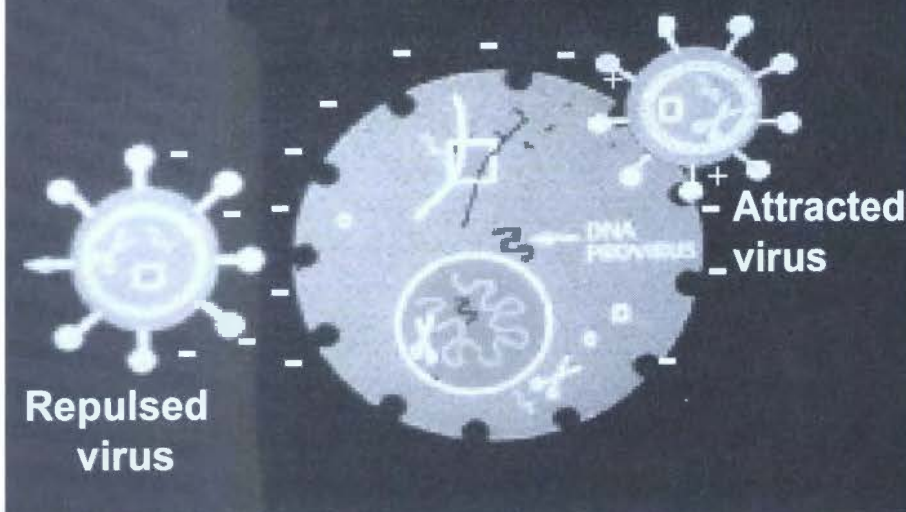
Some researchers are experimenting with the use of anaerobic bacteria as a form of gene therapy for cancer. When anaerobic bacteria are injected into the body, they tend to accumulate in hypoxic tumor areas. Investigators have advanced their hope of genetically modifying these bacteria to produce anti-malignant proteins as they reproduce.(Lemmon et al., 1997)

Given the information in this book, the decades of advanced work in genetically modifying infectious microbes is unnerving. Microorganisms are currently being made to: 1) alter the genetic machinery of human cells to which they become attached, promoting the production of certain proteins and hormones; 2) create biofilms around cells altering their surface charge and impacting cell mineral concentrations, cell membrane functions etc; and or 3) secrete their own form of hCG which would change the electrical characteristics of the cells to which they attach.

It is now well recognized that cancer cells can produce hCG, but certain types of tumor-associated bacteria also produce it.(Backus and Affronti, 1981) When Virginia Livingston-Wheeler reported this same finding back in the early 1970s (Livingston-Wheeler and Livingston, 1974) her findings were dismissed and she was labeled a quack. Acevedo and others have repeatedly shown that some tumor-associated bacteria will produce hCG or components of this hormone.

Acevedo and his colleagues in 1987 did immunocytochemical studies using antisera to hCG, and to its alpha and beta subunits. They demonstrated the expression of hCG-like material in nine bacterial strains. "Seven of these were isolated from patients with cancer and were definitely identified as *Streptococcus faecalis* (three strains), *Staphylococcus haemolyticus* (two strains), *Staphylococcus epidermidis* and *Escherichia coli* (single strains). The other two strains were cell-wall-deficient (CWD) variants, one identified as *Streptococcus bovis* isolated from the blood of a patient with a fever of unknown origin and a possible brain abscess."(Acevedo et al., 1987)

Fig. 7.6. Electrodynamics of Viral Infections



Normal cells carry more positive charges on their surface membrane than diseased and cancer cells which turn more superficially negative. This impairs your cells' electrical defense shield leaving you open to easier infections and genetic invasions. Enzyme therapies may help reduce this risk by helping to remove sialic acid residues from diseased and cancer cells reducing their surface negativity.

Cancer cell membranes carry distinctive surface proteins that should act as antigens, but they fail to. This is also likely due to the change in membrane surface electrochemistry. Normally, the body would react to foreign invaders and cancer cells by increasing antibody production by B-lymphocytes and increasing production and mobilization of T-cells and macrophages to attack these dangers. However, in cancer, immune cells are blocked from fully acting by compounds secreted by the tumor that inactivate white blood cell body-guards, and by the electrical shield of tumor cells.

Tumor cells also secrete chemicals and mucoid coats that provide a protective shield of negatively charged molecules around them. The mucoid shield of cancer cells differs very little from the coating on embryonic cells that resist immunological attack. Tumors also release factors that stimulate blood vessels to form and leak plasma into interstitial tissue. This creates lymphatic stagnation and additional disease conditions.

Harmful tumor mucoid coats can be broken down with pancreatic enzymes, bromelain, beta carotene, and heparin, which will chemically and electrically deshield the tumors and allow immune cells to attack.

Virus-to-Cell Membrane Electrodynamics in Cancer

Coatings of proteins, glycoproteins, and glycolipids encapsulate many viruses. These viral coats may contain either sialic acid or the enzyme sialidase. If sialic acid predominates, the virus will have a negative charge, but if sialidase predominates the virus will have a positive charge.(Cure, 1995) If sialidase predominates, the positively charged virus will be electrically attracted to the negatively charged cell surface. (See figure 7.6)

An interesting clinical note is that *arginine supplementation can activate latent herpes viral infections*. Arginine contains a strongly basic guanidine group. It is possible that arginine can enhance the infectivity of certain types of viruses by changing the electrical charge of the virus or cell membranes. It is known that inhibition of the sialidase enzyme will stop the entrance of viruses into cells. This suggests that viral inhibition may occur through chemical measures, or electronic neutralization.(Haltiwanger, 2002)

More interesting viral errata involves chicken soup—a well-known remedy for viral infections of the respiratory tract. When chicken soup is prepared without salt it has been found to contain large amounts of free electrons. These can electrically neutralize viruses with positively charged coats, and prevent viral entry into cells.(Haltiwanger, 2003)

Electronic microcurrent, infrared, and phototherapy devices, homeopathic preparations, and herbal preparations that supply the body with a plethora of free electrons, also clinically exhibit antiviral activity.

Treatments that have been reported to disrupt tumor cell coats include pancreatic enzymes,(Acevedo et al., 1998) plant enzymes such as bromelain,(Nieper, 1996) beta-carotene,(Nieper, 1985); heparin,(Nieper et al., 1999) and vaccines against hCG.(Acevedo et al., 1998; Triozzi and Stevens, 1999)

This latter finding suggests that the World Health Organization's anti-hCG vaccinations program targeting ethnic and Third World women was likely a depopulation *and* cancer prevention experiment.

Polychromatic States and Health: A Possible Unifying Theory

Prigogine's 1967 description of dissipative bioenergy structures advanced a model and an understanding of how open systems, like living organisms that have a steady flow of energy, can self-organize. *Clearly, biological systems are designed to take in and utilize energy from chemical sources (e.g., food), but they can also utilize energy and information to maintain their dynamic organization from resonant interactions with electromagnetic fields and acoustical waves.*

According to Dr. Mae-Wan Ho, "Energy flow is of no consequence unless the energy is trapped and stored within the system where it circulates before being dissipated." (Ho, 1996) This may mean that cellular structures that transduce, store, conduct, and couple energy are critical features of any living organism.

Living systems are characterized by a complex spectrum of coordinated action and rapid intercommunication between all parts. (Ho, 1996) The ideal complex activity spectrum of a healthy state is polychromatic where all frequencies of stored energy in the spectral range are equally represented and utilized, according to Dr. Ho. *In a diseased state, some frequencies may be present in excess and other frequencies may be missing.* For example it has been reported that a healthy forest emits a polychromatic spectrum of acoustical frequencies, and an unhealthy forest will have holes in its frequency spectrum. Yet, when the forest regains its health, it again emits a polychromatic spectrum of frequencies. The frequency holes somehow got filled!

When an area of the body stops properly communicating it will fall back on its own mode of frequency production, which according to Dr. Ho, leads to an impoverishment of its frequency spectrum. In looking at the example of cardiac frequency analyzers it has been discovered that sick people have less heart rate variability than healthy individuals.

The concept of polychromatism makes sense when you consider phenomena such as the healing effects of: sunlight, full

spectrum lights, music, tuning forks, chanting, toning, drumming, crystal bowls, sound therapies, prayer, love, the sound of a loved one's voice, essential oils, flower essences, healing touch, multiwave oscillators, and homeopathics. Something missing—some frequency or frequencies—are apparently provided by these resonating therapies.

From the consideration of applied frequency technologies, it can be theorized that one aspect of why these consonant technologies work is because they supply frequencies that are missing in the electromagnetic and acoustical spectra. When missing frequencies are supplied they, in a sense, fill gaps in the frequency spectrum of life. Other technologies might identify frequency excesses and pathogenic frequencies and would provide therapeutic frequency neutralization by phase reversal.

Electromagnetic technologies such as Rife frequency generators, the Quantum Xrroid Consciousness Interface (QXCI or “QuadMed”), and radionics machines may act similarly by pathogenic frequency phase reversal and neutralization. Royal Rife, a brilliant microscopist, also theorized that equipment using crystal resonant transmissions of energy could cause pathogenic organisms to oscillate to the point of destruction.

If you consider polychromatism to be the model of the healthy state, then it makes sense that technologies such as electrodermal screening and voice analysis that detect frequency imbalances (excesses and deficiencies) can play potentially beneficial diagnostic roles in health care.

Therapeutically, we believe doctors will increasingly utilize this type of equipment to treat a broad spectrum of frequency imbalances. More on this subject of therapies that impact the electrodynamics of cells and the future of electromedicine is provided in Chapter 12.

Chapter 8.

Advanced Electrogenetics

“We’re going to put back what is missing in a non-toxic way. We’re going to complete the electrogenetic pulse that’s found in all the higher living forms, in our cells, and in our physiology. If we can restore that pulse, we also restore the confidence that we are part of a continuum of energy flow in nature that is intimate to the emergence of organisms.”

Dr. Merrill Garnett

The First Pulse: A Personal Journey in Cancer Research

The previous three chapters provided an introduction to cellular electrodynamics with special focuses on electrochemistry and cancer. This chapter provides an advanced understanding of the direct role played by the “Sacred Spiral”—DNA—in electro-magnet-ically transmitting the “orchestra of life.”

For decades in search of a cancer cure, Dr. Merrill Garnett labored to discover the “original enzymatic gene site events” that might convert cancer cell anaerobiosis to normal aerobic metabolism. According to his predecessor, Dr. Otto Warburg, and others, oxygenating processes could turn cancers around. He studied hundreds of metallo-organic compounds to restore normality to genetically challenged, oxygen deprived, malignancies. Understanding that cancer cells mimicked embryonic cells in relying on anaerobic metabolism for their energy, he sought to “restore the aerobic portion of the cell metabolism that was missing.” He theorized that by “putting back the aerobic system” one could restore the pathways, needed to stress cancer cells into extinction.

“Modification and selection are the mechanisms of evolution,” he wrote. “They’re also the mechanisms of cellular evolution and cellular processes.” His “therapeutic mode” involved a selection that allowed the “emergence of the aerobic clones within the cancer.” (Garnett, 1998; 2001)

“In both cases, the anaerobic and the aerobic,” he realized, the energy molecule, ATP, is made from the same electron potential. Thus, without poisoning the ancient anaerobic glycolysis energizing cancer cells, while turning its own energy against itself, Dr. Garnett discovered a way to energetically direct DNA to reverse cancer and evolve healthy cells from within the same tissue.

“The external environment and the universe has always been an intimate force in the shaping of life,” he theorized. “The outside, the exterior, the without, the unknown is incorporated with the inside, the within, the deep reactions of the organism. The without and the within communicate continuously. They form those metastable states which can survive the winnowing and selection forces around the organism. . . . Gene material,” he concluded, must make use of this same philosophy, taking energy from ATP and the environment to form proteins in complex events. “Proteins have a life time, and they need stability for a certain period. Those stabilities and harmonies,” he reckoned, “are the organism. It is what we observe at a particular time as apparent stability of form, that we see with our eyes, even though this form is changing.

“That stability in time units, when examined from the physical chemical view, can be described in wave theory, through instrumentation in the analytic laboratory. It sees characteristic energy peaks in gene material, for example. These resonant frequencies carry on reactions. They are not just the signature. They are the active vibrating life of that molecule. These energies and reactivities will interact with the other material that comes close to the genetic material. If we look carefully, we will see that

reactions that transfer information and energy successfully have resonant wave interaction. They have a harmony of energy. They have a beat that's recognizable.”(Garnett, 1998; 2001)

Distinguished researchers paved the way for Dr. Garnett. The passage of electrical current and standing waves through genetic material had already been described as “an every day event in biochemistry. Groundbreaking studies of electron transfer in DNA” had been performed at Georgia Tech, Columbia, and Cal Tech. But Dr. Garnett credited Bistolfi in 1990 in Genoa, Italy for having first described the pulsing nature of DNA energy.

Poetically, Dr. Garnett wrote of this subject in his book, *The First Pulse: A Personal Journey in Cancer Research*:

There is a harmony of the organism and a harmony in structure that allows the transfer of energy so that the organism can live and vibrate. So it can carry on its metabolism and its replication. Those harmonies and resonances must be perceived as inherently musical, because those harmonies recur and recreate the organism. It is not merely random information, but rather information which can function, and to survive to function means efficiency. Ultimately, there is a musical or harmonic element within the organism which can recreate the patterns of information and energy. This is beautiful and resurgent. This is molecular music, fragile, dependent recurring under the right conditions, based in quantum echoes and hidden physics.(Garnett, 2001)

He also reflected, “electron transfer reactions favored the formation of DNA based genes over RNA based [decidedly carcinogenic] genes. DNA alone can absorb and buffer the cell against oxygen radicals. Oxygen radicals denature proteins at their sulphur sites. This protein denaturation is lethal. But the DNA acceptance of electron charge from oxyradicals allows a variety of gene reactions favoring modification and selection of cells, ensuring survival. . . . Electricity was first. It was the first meal. The first breakfast was electrons.”

Dr. Garnett added that even free radicals are benign by themselves. “We live in a field of radicals. We exhale free radicals, and

a halo of radicals floats over our heads and can be suppressed by a variety of drugs such as alcohol. . . . [R]adicals are a part of nature, and are neither bad nor good in and of themselves. . . . In cells, the radical state was too high an energy state to go unanswered. Living cells were injured by this instability, so they had to develop a new system to take care of radicals.(Garnett, 2001)

“In all the assemblage of metabolism,” Dr. Garnett continued, “and in all the cycles that we learn about in biochemistry, we see the scene repeated: the conversion of an electron transfer potential to a stored form of energy. In the variations of the organism, it always derives its energy from the electron. No matter what you are eating: carbohydrates, proteins, or fats (storing them as one molecule or another, as ATP or acyl bonds or fats)—you always start with that electron, and you accumulate that electrical potential, and your body conducts chemical events based on that electrical potential. That electrical potential is what we should measure and attend to in the flow of ions, salt and water, and in the fall out assemblages of ATP. . . . [as] the universe streams through us. . . .

“When we deal with a biological system, it isn’t surprising that the ancient form of energy released is that of an electron jump from one molecule to another. As organisms evolve they become more complex. The number of protein enzymes which handle electrons increase greatly and electron energy is stored in chemical bonds called ATP. The highly efficient system can make more ATP. . . . As we know, the molecules in the Krebs cycle are dismembered of their charge by proteins, and then the electrons are transferred. The energy runs down hill. And down at the end of the hills is oxygen with a tremendous hunger for electrons.” But it wasn’t until years later that he realized “there was also DNA with an even greater hunger for electrons.”(Garnett, 1998; 2001)

DNA and the Life Force Schematic

In reviewing aerobic metabolism, and concluding the energy schematic of life, Dr. Garnett submitted:

The first metabolic mechanism is designed to admit oxygen. This is Carbonic anhydrase. The next one is the charge transfer species, which takes the charge from the oxygen radical and conducts it through the radius of the cell to the center, to the DNA, and creates an electrical field. These mechanisms form the inward current. After these two mechanisms, a third arises, which takes the electrons at a receptor site and puts them on an oxygen molecule to make peroxide, then hydrates it to make hydrogen peroxide. It then splits the peroxide to make hydroxyl radicals, and donates these to the surprisingly ancient enzyme product, procollagen. Then the procollagen flows out, not as a gelatinous liquid, but as fiber, to become mature collagen, which binds cells to tissues. This is the outward current. The schematic is complete. The cell has its first pulse, which makes an active energy exchange between the internal and the external, at a higher level than had been found before in nature. And this first pulse resonates with many other cells, and the packed cells carry on their pulsations with the environment. They resonate with each other and set each other off by inductive influence so that their pulses increase. And the tissue pulses appear, and the heart beats and the brain discharges and the muscles evolve. The organelles modulate and use this in contractile structures, converting the pulse to organic phosphates and other high energy bonds. But the cell pulse is first and provides the raw electrical energy for all the physiological pulses.[Emphasis added.](Garnett, 1998; 2001)

Dr. Garnett considered the differences between direct currents (DC) versus alternating currents (AC) in biological systems critical to energy (i.e., electron and charge) transfer. He realized the biological limitations of continuous direct current electricity, and the necessity of AC to achieve the high efficiency electron transfers needed for biological systems to operate along with a Life Force. In describing his own evolution in consciousness, he referred to the accomplishments of Nicola Tesla and Thomas Edison.

Tesla arrived in the late 1800s to prove the efficacy of pulsed or alternating electrical current. He showed how pulsed electrical current, that is AC, most efficiently propagates “because the field collapses along the conductor and reinduces the flow of electricity. *As long as you pulse, energy can traverse great distances* with low ohmic resistances, and with an impedance that can be calculated and planned from the material at a frequency,” Dr. Garnett wrote. Today, thanks to Tesla, we transfer electricity over great distances using AC.

Thomas Edison invented the DC light bulb and engaged in the first experiments directing continuous current through electrical wire. But DC current electricity could only travel about a mile and a half before dying due to the wire’s resistance. This resistance causes heat and stoppage of electrical flow. Alternatively, the Westinghouse company used AC to send electricity from Niagara Falls to far removed places throughout New York State. AC current had overcome wire resistance, with only a trivial amount of remaining impedance.

Dr. Garnett considered reciprocal electrical networks that acquire all their energy from their own components, with zero reliance on external energy sources. Many large molecules, he explained, have “electronic character such as capacitance or inductance.” Voltage through capacitors always lags the flow of current. Current through inductors, on the other hand, always lags the flow of voltage. “These lags produce pulsed or intermittent peaks in the electrical signals,” Dr. Garnett explained. For example, he found that the sodium potassium ATPase enzyme had an average frequency of six Hertz.

When he looked at the data on DNA, he realized this genetic material resonated at several frequencies. Thus, he concluded, DNA stored both molecular and energetic information. “DNA sets up the critical resonant frequencies of a cellular pulse. Then, over time, there is the emergence of a tissue pulse, and organ pulses, and neurologic pulses,” Dr. Garnett explained. “We must

look at these resonances if we are to understand what is uniquely alive. There is a reciprocal network of molecular echoes behind the physiologic pulse.”(Garnett 1998; 2001)

Further explaining genetic electro-resonance, and its fundamental role in energizing life, Dr. Garnett reported:

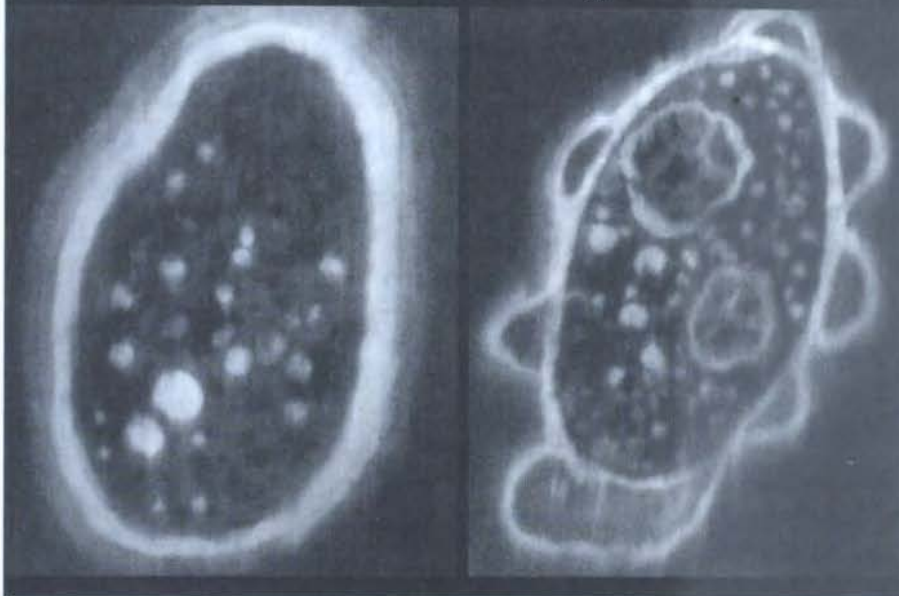
The DNA resonates with charge. It has harmonics, like a string quartet. To get anything to move efficiently, like say a surfer on a wave, you wait for the wave that can carry the kick and paddle, so that the sine peaks overlap, and the energies carry each other. This is how the pulse works. This is how any harmonics works. The only nonchaotic, nonturbulent way of transferring energy efficiently is by overlapping crests of the peaks of these energies. This is the resonance of the organism. The intrinsic beat of the DNA is 55 beats a minute, in the case of calf thymus DNA. The beat diminishes with Digoxin, and rises with Noradrenaline. . . . The organism is a pulsed system . . . the frequency response molecules in solution.(Garnett, 1998; 2001)

Contrasting traditional drug use and chemotherapies with this far more efficient “electro-active” manner of energy movement to induce biological outcomes, Dr. Garnett reasoned:

Organic metabolic conversion is the great biochemical sequence of the body. As electron transfer comes in, we add, for the first time, energy transfer through the system that is of an electronic nature, and which has very little binding. The whole convention for drug interaction has been binding (at the binding site). When we switch to electronic discharge, the coefficient of binding is 10^{-15} seconds. So it's not really binding any more. It's a bounce, it's a spark. Your spark plug is not bound to your piston. It just sparks it. Similarly, electro-active drugs are not bound to their receptors. Even though they need their receptors, they just spark them. The current is modulated, much like through a transistor. There's a burst of energy. There isn't binding in the sense of a structure. There is only binding in the recognition sense. (Garnett, 1998; 2001)

Eventually, Dr. Garnett learned that “electronics can be done in liquids just as you do in a radio or television, providing your wave forms and your electronics are well modulated.

Fig. 8.1. Dr. Garnett's Energy Experiments



The two photomicrographs above are of the protozoan *Tetrahymena*, before and following treatment with the electro-metallic anti-cancer drug *palladium lipoic acid*. The organism maintains similar membrane attachments as cancer cells. In the upper left photomicrograph the organism appears normal with a definitive, well-structured, cell membrane. Following treatment and attachment of the energetically active pharmaceutical, the cytoplasm lost its halo and turned gray. Then obvious cell leakage was observed. The organism's guts poured out prior to death. Consistent with cancer cell experiments, "the cells began to leak and collapse rather uniformly.... It appeared the new drug was a shunt, a carrier of electrical charge, which had both a source and a place to target." Below are liquid crystal micrographs. Prothrombin is on the left. DNA liquid crystal showing curved and angular branches is on the right. (Garnett, 2001)



He studied molecular tuning. “We could always tune them [molecules] by voltage, but now we’re tuning them by frequency.

“The intermittent nature of a current flow in a circuit arises in the capacitance and inductance of the device units,” he continued. “. . . [E]lectronic devices are now biological molecules. Many of the large biological molecules can be seen as electronic capacitors. A few can be seen as inductors. . . . *The charge that exists in these compounds exists on the surface hydrates of the molecules.* And that hydration charge is transferable.”[Emphasis added.](Garnett, 1998, 2001)

This work has impacted the world of AIDS research, cancer virology, and the immune-taxing enzyme RNA-dependent DNA polymerase, better known as reverse transcriptase (i.e., the enzyme that is said to make HIV a ticking time bomb). Dr. Garnett based his chemotherapy and tumor treatments on the restoration of electrical charges with exceptional results. His somewhat technical explanation of this success included the following:

What makes it even more fascinating is we found that along with the charge transfer, that there is a possibility of dual kinetics, whereas one acceptor of charge will enable charge transfer, another acceptor will cause the production of radicals. And instead of a reductase-type reaction it will be a peroxidase. So there is charge transfer in one direction towards DNA. And in the other direction, using double stranded RNA or T-RNA or viral RNA, there is peroxidation. We suddenly see that nature has set up a choice for the DNA and RNA world, to go either with charge transfer or peroxidation. Peroxidation is a highly dangerous, potentially toxic modifying and selecting reaction. The proportion of DNA to RNA will make a decision in the life of this cell.(Garnett, 2001)

Garnett’s Liquid Crystal Faraday Effect

“Electrogenetics refers to the energy reactions by which the living state interacts with its heredity material. . . . [I]n the living state the transmission cables are made of long chain mol-

ecules we call polymers. The polymers that do a lot of work are prothrombin, DNA, RNA, membrane phospholipids, hyaluronic acid and procollagen. If you study these polymers individually, they are dull electronically. That's because they only become efficient electronic devices when they are coated with a suitable dielectric shield. That dielectric shield is the polymer *hyaluronic acid*. *Once you coat prothrombin or DNA or RNA with hyaluronic acid, they carry current efficiently.*

Besides a number of variables studied by Dr. Garnett to elucidate electrogenetics, including the natural electronic impedance of the aforementioned polymers, and *pseudoinductance* in the intracellular fluid matrix, Dr. Garnett studied liquid crystals. He found something fascinating about cancer. Greater than the supposed impact of oncogenes on carcinogenesis, cancer cells triggered what appeared to be clearly associated with "the destruction of liquid crystallinity." How was this determined?

Dr. Garnett and colleagues exposed polymers and interacting polymers to magnetic fields, and observed the formation of continuous liquid-crystal patterns on slides as the water was evaporated. Liquid-crystal fern patterns emerged under the influence of magnetic fields. This response has been called the *Fredericks transition*. The liquid-crystals showed electrostatic or magnetic field sensitivity demonstrated by various crystal lattice shapes and patterns. After that, researchers at the Garnett McKen Laboratory studied the effects of carcinogens, like tobacco smoke, on the drying liquid-crystal. The cancer triggers always caused dramatic restructuring of the liquid-crystals evident in their dried patterns. The tobacco smoke, for instance, "produced magnificent, glowing, crystal crosses where there had been a continuous fern pattern previously.(Garnett, 1998; 2001)

Garnett's group concluded that carcinogens interfere with liquid crystal formation as mediated by and through cellular molecular energy systems. Here is what they wrote:

The data shows that we have fields within us that provide symmetric influences over long distances. These influence not just the polymers within cells, but the cells themselves. The larger form follows its constituent forms. We have the challenge to measure the degree to which field effects alter biologic form. We realize that we have nano-fields, and that nanotechnology is pervasive. It's a subject that's been under our nose and it is time we noticed that electronics is more than direct current and electrostatics.(Garnett, 2001)

Clustered Water and DNA Electrochemistry

Chapter 3 provided an introduction to the most vital life elements—hydrogen and oxygen—energetically harmonized into water molecules. These molecules are, like their constituents, directed by sound and electromagnetic frequencies to form larger sacred geometric forms called “structured” or “clustered” water. These energetically gathered and directed forms of water are essential for optimal DNA function in the realm of electrogenetics. This section offers greater detail on this important topic.

The first reference to water clusters was made by English chemist Robert Boyle in 1661. Previously, herein, and in Dr. Horowitz's previous books, he discussed clustered water and its critical role in facilitating intercellular communications and cellular up-regulation through the DNA liquid crystal matrix.(Horowitz, 2001; Horowitz and Puleo 1999). The entire field of electrochemical communications through nano-structured aqueous solutions is now burgeoning and reinforcing these earlier reports.

In *Healing Codes for the Biological Apocalypse*, Dr. Horowitz wrote how new Bible code discoveries revealed the original six note Solfeggio (musical) scale that included the 528Hz frequency associated with genetic repair, and the ancient middle “C” note. The same frequency has been used by leading military weapons technicians for “tuning” sophisticated hardware. Dr. Lee Lorenzen, developer of one of the first clustered water formulas, used the same frequency, 528Hz, in a nutritional health

supplement. “Intimately related to this discussion,” Dr. Horowitz wrote, “. . . investigators discovered that *six-sided, crystal-shaped, hexagonal, clustered-water molecules* form the supportive [and electrically active] *matrix* of healthy DNA. During aging and intoxication, these water clusters are depleted, thus, compromising the electrical potential and integrity of cellular DNA. This primary process, underlying aging, negatively affects virtually every physiological function.

According to biochemist and author Steve Chemiske, these six-sided crystal-clear water clusters that support the DNA double helix structure, “vibrate at specific resonant frequencies and these frequencies can help restore homeostasis to cell structures in the body through signal transduction . . . the process by which one form of energy is converted to another.

“When clustered water is consumed,” Chemiske wrote, “high frequency information is transmitted to proteins . . . [and] this wave of information is carried throughout the body like a ‘wake-up call’ to restore normal function.”

Dr. Franco Bistolfi, a bioelectronics expert, theorized that intercellular communications, instantaneously affecting cells throughout the body, occurs “by means of piezoelectric interactions and photon/phonon transduction of electromagnetic signals of both endogenous and exogenous origin.” Much of this book’s content has already addressed these topics. In short, tiny imperceptible energy signals, both man-made and natural, profoundly influence health status and the pathogenic processes involved in virtually every disease. (Horowitz & Puleo, 1999; Liu, Cruzan and Saykally, 1996; and Chemiske, 1998)

Dr. Horowitz recalled that in *The Secret Life of Plants*, plant physiology was shown to react dramatically to the sound of the human voice. Words—electromagnetic and bioacoustic energies— positive and negative, produced profound changes in water structure, molecular flow, and vibrational dynamics. This affects, Dr. Horowitz reasoned, the basic physiological functions upon which plant and animal life rests. Plants, like humans, are composed mostly of water, and especially important structured water. These uniquely-shaped water rings function as electro-

magnetic memory units capable of transmitting memories of sound, color, and light frequencies to humans and plants. This, again, is the science upon which the entire field of homeopathic medicine rests.

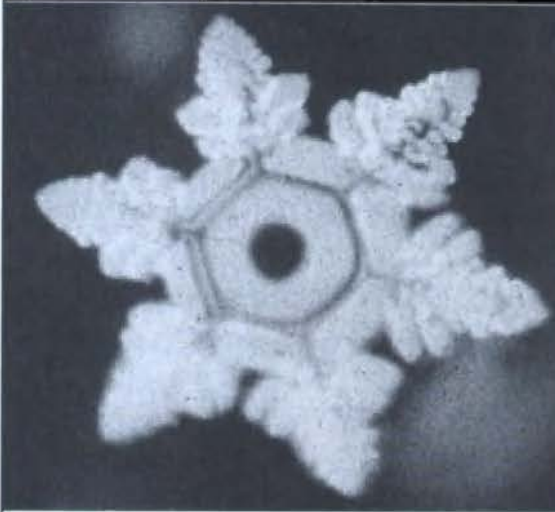
Among the first labors of love to graphically document these phenomena is *The Message from Water: Take a Look At Ourselves*. The book's author, the renowned Japanese physician, Dr. Masaru Emoto, published full color photomicrographs (i.e., 20,000 magnification) of beautiful six-sided ringed crystal water clusters. Some of those were formed from cryogenically cooled water electromagnetically influenced by various sounds, music, and words. A black and white composite of these amazing pictures was reprinted in figure 3.4 with an enlargement of a representative structure in figure 8.2. Dr. Emoto showed that "heavy metal music," or condemning words, caused beautiful regularly-shaped water clusters like these to explode into shapeless messes. Dr. Emoto explained, as many religious/spiritual leaders have, that words and music coming from "good" or "evil" hearts can profoundly affect human health and energy. It is astonishing that these effects are mediated by water through DNA. (Emoto, 2000)

Dr. Emoto concluded, "Indeed, there is nothing more important than love and gratitude in this world. Just by expressing love and gratitude, the water around us and in our bodies changes so beautifully. We want to apply this in our daily lives, don't we?"

Water Rings, Sacred geometry and Bio-Electricity

Since Dr. Horowitz first reported on clustered water in 1999 in *Healing Codes for the Biological Apocalypse*, the field of water science has exploded with structured water revelations. According to Harvard Paleontologist, Dr. Stephen Jay Gould, the cutting edge of health science and electrochemistry now involves pentagonal and hexagonal water rings. Two key areas of ongoing research are: 1) structured water ring induction of order or chaos in proteins, including enzymes and membrane structures; and 2) the apparently vital roles these ringed structures play in transducing and amplifying energy processes required for life.

Fig. 8.2. Water Clusters and DNA Electronics



Health reporter Uri Dowbenko described clustered water and the work of Dr. Albert von Szent-Gyorgyi, a doctor who dedicated his life to looking at water structure, and won the Nobel Prize in 1937. Dowbenko described Dr. Lorenzen's and Dr. Emoto's efforts in Japan investigating the famous healing springs of Kirumisu. These re-

searchers designed a way of flash-freezing water with liquid nitrogen right at the source of the spring. They kept it in liquid nitrogen, brought the samples back to their laboratory in Tokyo, and then analyzed them. They were able to show a relationship between the structured water source and its healing properties.

Healing water was micro-clustered, or structured in geometric rings. The molecular composites looked like six-sided snowflakes when frozen. "It was basically these hexagons—these forms that were most prevalent in the healing springs—that don't really exist in a lot of other areas," Dr. Lorenzen explained. "When you flash freeze them, you can do crystallography and X-ray analyses. It was really quite unique. We had no idea that water would form like this."

They published these findings in the Japanese scientific journal *Snow and Ice*. Later they published *Message from Water*, a summary of more than ten thousand photographs taken during their research.

Some forms of energized clustered spring water can remain fairly stable with good biological activity. "Biologically active means that the water works well in hydrating living tissue, unlike common [fluoridated and chlorinated] tap water. Most importantly, the size and shape of these unique water molecules allows them to pass through cell walls freely, delivering oxygen, nutrients, proteins, and enzymes, while removing toxic substances.

To make Dr. Lorenzen's patented form of clustered water, purified water was spun through a vortex, which created the six-sided molecular structures. Next, an extremely high-powered magnet was used to produce the long-term stability of this structure. Using this method, a Clustered Water concentrate was created, bottled, and

distributed. When one ounce of this concentrate was placed in one gallon of steam-distilled water (ideally in a glass bottle with a plastic or cork top containing no metals), then shaken, and then refrigerated for eight hours, the entire solution became clustered like that of healing spring water.

"This is the primary form of water in a very young child," explained Dr. Lorenzen. "Similar research done by Dr. Katayama called it clustered water, or biowater. He showed that biowater is the dominant form of water in very young, potent cells. By the time you reach the age of thirty-six, your amount of biowater or clustered water drops by sixty percent."

The effects of this water, Dr. Lorenzen reported, are twofold. First, a standing wave effect is produced in cellular structures and cytoplasm as described by Professor Waterson of Griffiths University. This nanotechnological affect helps to reorient water along proteins, which helps protein, body enzymes, and more, function most efficiently.

"Secondly, what's left over after the standing wave, is a large collection of water rings that have a very high mobility," Dr. Lorenzen continued. "It penetrates the body through the stomach. In just a few days, we see that someone who's very ill and dehydrated will show a very significant improvement in overall health and energy levels. . . . We're just trying to help re-induce order in the protein systems. Protein systems themselves can't have adequate order, unless there are actual water rings involved in bending and holding the proteins."

This research has been ongoing in Japan for more than fifteen years. "Frankly, the Japanese were just more open-minded about new technologies," Dr. Lorenzen admitted. "We've done clinical double-blind studies with private physicians. And we've taken that data, very significant data, to universities and research facilities [in the United States]. They dismissed it. . . . They said it was not possible."

Dr. Lorenzen acquired more than 210,000 patient histories showing that clustered water helps in a variety of ailments, but he insisted "it is not disease-specific, but it helps in overall cell function. . . . It's a much more efficient way of hydrating cell systems in that it's giving [or returning] the water ring structure, which is necessary for normal cell [DNA and enzyme] function, signaling, replication, and repair. As we age, we dehydrate anyway. That's well documented. . . . We're showing that with these clustered water solutions we can help eliminate edema, help improve intercellular water pressure, help improve protein structure, and therefore cell function." (Dowbenki, 2002)

Most recent research has shown that these ringed structures are highly active in stabilizing proteins, besides genetic electromagnetics. This is adequately detailed by Yao (1997) regarding aromatic rings and proline in bolstering protein integrity. Boge (1995) also reported stabilizing Taxol—the anticancer drug originally derived from Yew bark—with water rings from microtubule assemblies. Serrano et. al., did the same.(Gould, 2003)

Research described by Tetter determined that water rings had special relevance in controlling protein function as well as structure. In reviewing data on the hydrophobic protein crambin (MW4700), water rings were proven critical in stabilizing folded protein structures required for normal enzyme activity.(Gould, 2003)

Gould also described the hydrophobic protein crambin with pentagonal and hexagonal water rings associated with its electric structure and function. These, he wrote, were associated with “chains of water linking polar residues.” He wrote of the electrical properties of water rings in facilitating protein performance, “The chain-like arrays are strongly influenced by the protein surface, and inversely, with the flow of high frequency signals [from the water rings] through semi conductive proteins.”(Gould, 2003)

This same determination was published by Liu and Seykally et al. (1996), regarding the perfect spiraling form of DNA for optimal genetic expression including regulation of protein synthesis.

In fact, DNA expression, protein metabolism, and energy conduction throughout your body completely depends upon pentagonal and hexagonal-shaped water rings. Dr. Jon Mushuku, previously at the University of Miami, currently a professor at the University of Seoul, Korea, postulated that hexagonal water rings are the most powerful influences upon ordering protein structures. Pentagonal-shaped water rings were most commonly found in association with simple sugars.(Gould, 2003)

Dr. Gould reviewed works by numerous other investigators in this field to develop a consensus regarding the vital role played by clustered water rings in facilitating, if not regulating, energy processes within cells and tissues. Among his most fascinating reviews concerned the work of UCLA physicist, Seth Putterman, presented before the Acoustical Society of America. As you read the following paragraphs excerpted from Dr. Gould's unpublished paper, written shortly before he died prematurely at age 60, recognize that the implications of these findings for revolutionizing health care through sound and color therapies are profound:

Because Smith has postulated that water rings have the capacity to amplify high frequency cell signaling, ring function may be similar to the energy transduction and amplification properties of "light bubbles." . . . Putterman reported that an oscillating gas bubble driven by sound waves could capture the wave, concentrate this energy more than a trillion times and generate light. Known as sonoluminescence, it was shown that the bubble would expand in a water/glycerin mixture under the effects of a 20-kilohertz sound field, followed by a sudden collapse and transfer of energy to interior atoms, which released light, blinking in synchrony with the sound frequency. [Authors' note: This helps explain the mysterious formation of "bubble rings" by sonically empowered free dolphins as discussed in Chapter 12 in the context of bioacoustic healing.] Because water clusters and rings possess the ability to change structure rapidly in response to coherent waveforms, water ring/gas structure transduction may be an important process to consider in cell energetics and coherent wave transmission. Chen has found significant photon [light energy] emissions from proteins, especially during cell reproduction/division stages wherein DNA appears most active.

This appears to be in agreement with the findings of Lipcomb. It has been shown that there is a relationship between water ring size and frequency of occurrence relative to nucleic acid interfaces. Thermal mobility was found to be significantly greater in these regions associated with water rings. If the central AT base pair [of DNA] is switched to a CG base pair, there should be a low energy cost in avoiding

the guanine amino group. The energy difference for binding preference between d(CGTACG) and d(CGCGCG) could be considerably less than 20 kcal/mole.

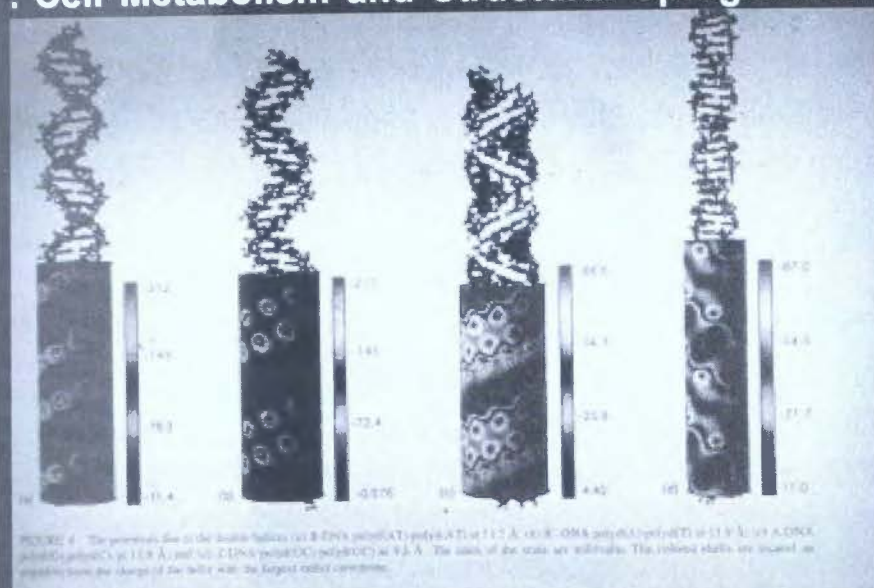
We postulate that there are two primary modes of action of nano-structured resonant water (NRW) solutions. First, hexagonal and pentagonal water rings are formed and exposed to bioactive compounds at established excitation frequencies. These organized domains of ringed water have specific excitation spectra that are released upon exposure to living tissues. It is believed that the rapid release of frequency-specific information can be amplified and transmitted through the bioelectronic connectional system to influence protein structure. (Galvanic skin response measurements document a conduction wave within 2 seconds after consumption of a structured water solution.) A second biological effect is accomplished following the disintegration of organized water domains. Water structures maintain stability at 37 degrees centigrade with many surviving the acid environment of the GI tract. (Gould, 2003)

Liquid Amplification of High Frequency Cell Signaling

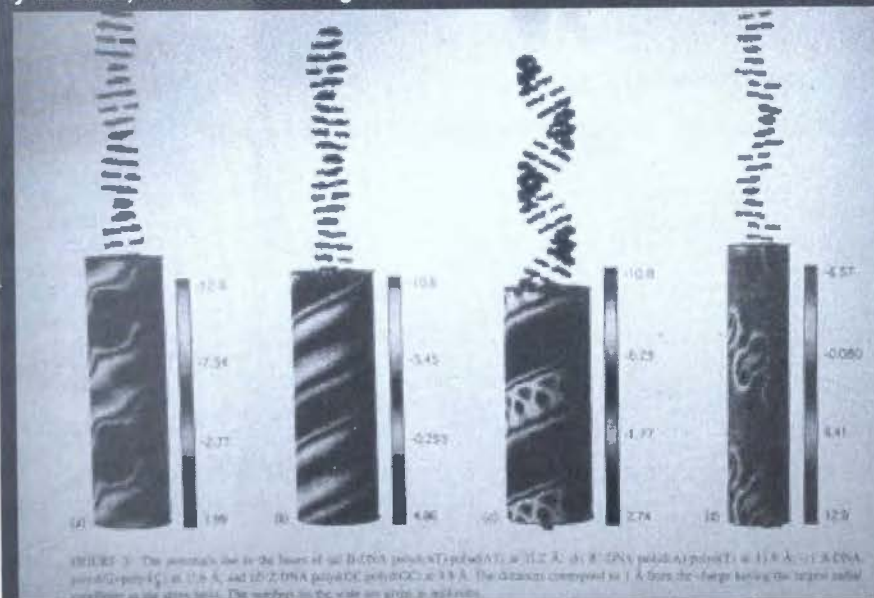
Regarding the “Sacred geometry” represented in water clusters, organic chemistry, and throughout all life forms, electronic configurations have a direct affect on the frequency of various structures and structure sizes. According to Dr. Gould, specific electronic bonding patterns make certain structures particularly stable. Gould found that small changes in the structure size of water produced large changes in its adsorptive behavior. This reinforced the fact that water structures represent a unique phase of matter.

Physics University professor Dr. Martin Armbruster, in Freiburg Germany, demonstrated that negatively charged water clusters were extremely common. They are composed of eight or more negatively charged water molecules. Dr. L. M. Banic at the McLennon Physics Research Laboratory at the University of Toronto found more than forty-nine distinct water molecule

Fig.8.3. Electrogenetics of DNA and Clustered Water : Cell Metabolism and Structural Upregulation



Electrical potentials in millivolts of adequately hydrated DNA are shown in the figures above. Saykally et. al, showed small clustered water rings, mostly six-sided, facilitate electromagnetic transmissions to and from the double helix.



The figures above show the results of dehydration of clustered water from DNA. Resulting drops in millivolt potentials for electromagnetic cell signaling (i.e., frequency upregulation for structural integrity and metabolic functioning) are shown. Besides greater electrical potentials, the upper figures clearly show more pronounced stronger frequency transmissions reflected in the well formed patterns in the associated radial photographs. Source: K Liu, JD Cruzan and RJ Saykally. Water Clusters. *Science* (16 Feb) 1996;271:929-931.

structures surrounding carbon and sulfur dioxides and charged ions. These findings were confirmed by several other investigators. Due to the unique chemical and resonance activities of these structures, these organizations can hold several “minima in free energy potentials, leading to the coexistence of solid and liquid structures, enhancing the potential for communication in cellular systems,” Dr. Gould reported.(Gould, 2003)

When water structures combine with active biomolecules, resonant information is transferred. This process, widely known to occur in science, has now been proven with nano-structured resonant water, or NRW. Among the unique characteristics of these structures is their ability, within certain parameters, to trigger self-reproduction, that is autocatalytic, structural “cloning” in other fluids. Massachusetts General Hospital researchers Szostak and Doudna, writing in *Science News*, described a similar autocatalytic process occurring with reproductive material.(Gould, 2003)

Nano-Structured Aqueous Solutions and Homeopathics

Dr. Gould observed solutions of NRW had been corrupted by magnetic fields during sterilization. His working theory was that sterilization with powerful pulsed magnetic fields could disrupt paramagnetic molecules in bacteria and yeast. The technique caused destabilization of microbial membranes leading to cell death and sterility. Although these tests proved successful, samples of the exposed solutions exhibited bizarre properties. They caused symptoms of tachycardia, altered blood pressure, and sympathetic nervous system stimulation in human test subjects. Dr. Gould continued his research to explain these outcomes.

Over the ensuing years, Gould’s determinations reinforced the underlying notion of homeopathic therapeutics. He discovered that “water structures can be directed to bind to pharmaco-

logical active substrates,” then through processing and removal of the substance, the liquid would retain many of the agent’s activity in the water structures themselves.” This homeopathic-like process of energizing water with a specific frequency associated with the active substrate became the focus of his Nano Template Induction patent application aimed at developing new solutions with low risk and predictable biological activity.

Dr. Jacque Benveniste and his associates published in *Nature* (June, 1988) that homeopathic-like preparations of water agitated with immunoglobulin E (IgE) maintained biological activity despite being diluted beyond concentrations in which any IgE remained in solution. Although their findings were independently confirmed in six separate labs in four countries, no one could explain the transmission of biological activity. “We demonstrated that what supports the (biological) activity at high dilutions is not a molecule. Whatever its nature, it is capable of reproducing subtle molecular variations, such as the rearrangement of the variable region of an IgG (anti-e vs. anti-y) molecule,” they published. “Water could act as a template for the molecule, for example, by an infinite hydrogen-bonded network or electric and magnetic fields,” they theorized.

The transmission of biological activity depended on the dilution and agitation process, much like the technique used for centuries with homeopathic preparations. These contemporary scientists theorized the creation of a “sub molecular organization of water.” Barnard and Stephenson (1967; 1969) revealed the “successes of high dilutions represent stereospecific, isotactic polymers imprinted in the solvent by the solute, with self-replicating qualities in the absence of the initial solute. Thus, as in cytoplasmic molecular chemistry, the information content of the solute may reproduce itself separate from its chemical action.”

Dr. W.W. Smith in the Department of Electrical Engineering at the University of Salford in England researched structured water’s electrical properties comparing it to well known electri-

cal components. When water containing small amounts of allergin was administered to highly allergic patients, he learned that the water had “memory.” The solution, diluted far beyond Avogadro’s number of dilutions necessary to assure no allergen remained in solution, nevertheless caused potent allergic responses. Even when frozen, the water retained its ability to prompt allergic reactions. Smith’s study was confirmed by other investigators using double-blind measures.

To confirm the biological effect observed, Dr. Gould described experiments done to determine whether high frequency emissions were responsible for the results. Screens with varying mesh sizes were used to filter the allergenic solutions. Other techniques were used as well. The results determined that frequencies above 100GHz were responsible for the allergic response. This finding jibbed with previous reports by Dr. Herbert Frohlich, a physicist at the University of London. Dr. Frohlich predicted that cell membranes maintained fundamental coherent energy oscillations with frequencies in the order of 100 GHz.

Dr. Smith commented that five and six-sided water helices would be suitable models to describe simple oscillators, and that these pentagonal and hexagonal structures would resemble electrical relay cables used to construct energy resonators. This is analogous to acoustic musical resonances produced by stringed instruments. Structuring only one milliliter of water into a single helical organization of water molecules “could provide a delay of about one minute, making a resonator of about 1/100Hz,” Dr. Gould determined.

Water’s Unique Physical and Resonant Capabilities

Water maintains the unique ability to mystify even the brightest materials scientists. Dr. B.V. Deryaguin, a physics professor at the Moscow Institute of Science, injected water into glass capillaries to observe the effects on hydrogen bonding. When the water was heated in these microtubules, the boiling point became

an astonishing 500°C. The freezing point dropped to -40°C with an increased density of 140%. When pure water is freed of dissolved gasses, the boiling point can reach 180°C. Upon further heating, the water will, literally, explode!

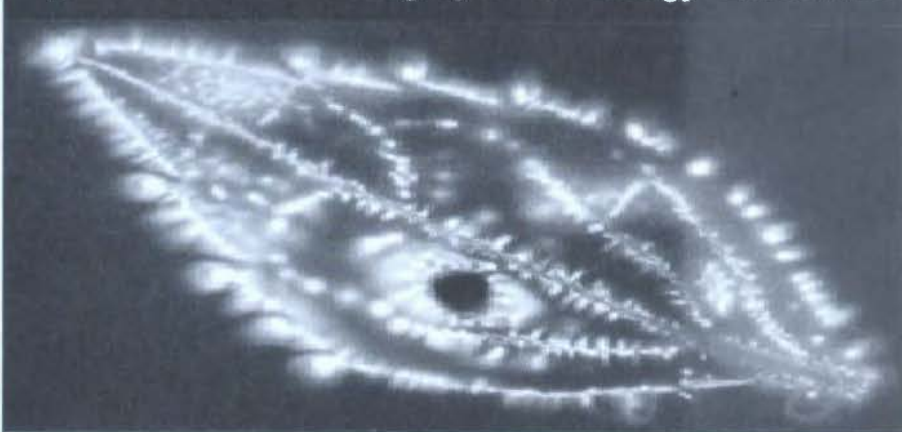
Although the traditional freezing temperature is 0°C/32°F, and the density of water is greater than ice, when water is compressed (e.g., to 20,000 atmospheres) and then cooled, new varieties of ice emerge that are all denser than water. The ice called “ice II” is denser than water by 12%. This, and another species referred to as “ice III” contains oxygen atoms that are tetrahedrally surrounded by four more oxygen atoms. The only known difference between these species of frozen water is caused by distortions in molecular linkages or differences in hydrogen bonding. To date, seven known forms of ice have been discovered, some with as many as four hydrogen bonds (versus typically two).

Dr. Gould wisely noted that the actual state and structure of water in cell cytoplasm can dramatically differ between in vitro versus in vivo experiments. “Biologists in the 19th century generally considered the cytoplasm to be highly organized, however, lack of technical substantiation [and the political paradigm in which biological sciences evolved] kept this theory limited to the minority of cell researchers.”(Gould, 2003)

Among the first contemporary investigators to document the high-powered physical activity of structured water was Dr. Julia Goodfellow at London’s Birbeck College, Department of Crystallography. She showed that water interacted with biological macromolecules causing proteins to fold, enzymes to change activity, DNA and RNA structural alterations, protein transformations, and that “hydration forces in cell metabolism were much stronger and greater in influence than originally thought.”(Gould, 2003)

Later, Dr. Ivan Cameron at the University of Texas Health Science Center in San Antonio proposed four classifications of biologically-associated water based on a number of scientific measures. These cell water types included:

Fig. 8.4. Kirlian Photographs of Energy Emissions



Healthy ecosystems and healthy organisms emit a wide range of acoustical and electromagnetic frequencies—a broad spectrum of energies. Unhealthy organisms and ecosystems have frequency emission imbalances wherein some frequencies are transmitted in excess or insufficiently leaving holes in emission spectra of electromagnetic and/or acoustical energies. The above photograph, taken using a Kirlian camera, reveals a healthy “aura” emanating from a leaf.

It is now known that sick individuals commonly show certain emission bands with either excessive or deficient energies. Where they have deficiencies, holes in their auras will be seen or photographed.

The authors theorize that such persons will be naturally or intuitively attracted to a balancing energy source. We also believe one reason you may feel uncomfortable being around sick, unhappy, and/or negative people is that you intuitively perceive being resonantly drained of energy. Such statements as, “You put off bad vibes,” may actually point to a physical/electromagnetic mechanism of energy transfer.

Individuals, various geometrical structures, and even geographical locations with different minerals, crystalline rock structures, natural magnetic forces, and/or man-made electrical appliances, all emit different energy frequencies.

The Kirlian fingertip photos below are of the same person before (left) and after a hands-on energy healing treatment.



1. *Bulk Water*—water so distant from the solute that its molecular motion is determined only by the interaction characteristics of the water structures themselves;
2. *Bound Water*—water molecules that are hydrogen bonded to fixed polar sites (i.e., electric dipoles) or to ionic charge sites, thus distinct from bulk water;
3. *Organized Water*—water molecules that are electrically or chemically influenced or “perturbed” that are distinct from bulk water.
4. *Hydration Water*—water molecules in groups 2 and 3 above.

These categories provide a framework within which the electrodynamic nature of water may be considered in facilitating the expression of genes, and metabolic functions of proteins and enzymes.

Advancing Theories of Organized Water

The most prominent scientist in this multidisciplinary field has been Dr. Gilbert N. Ling in the Department of Molecular Biology at Philadelphia’s Pennsylvania Hospital. Through extremely sophisticated technical methodologies, Dr. Ling developed his Association-Induction (AI) hypothesis best explaining the dynamics of structured water in relation to cell membrane activities. As stated by Dr. Ling, “the confirmation of the polarized Multilayer Theory of cell water by nuclear magnetic resonance (NMR), dielectric, neutron scattering, and other studies not only reverses the conventional belief of the existence of cell water as normal liquid water, it also gives a new definition to colloids.”

Confirming Dr. Ling’s hypothesis at the Department of Biochemistry at Monash University in Australia was Dr. John G. Watterson. This investigator theorized, much like we have discussed previously, that organized water clusters travel in *stationary waves* through cellular and extracellular matrices. The

organized water forms “an array of cubic structures separated from one another by the nodal planes which make up the faces of the cubes.” Although these cubes are composed of individual water molecules, they react as a unified structure, partaking in cellular up-regulation and coordinated function.(Gould, 2003)

Coherent Energy Transmission

Science has tended to thermodynamically characterize the organization of “coupled reaction-diffusion processes in terms of the free-energy flow. This course has taken us far in our attempts to understand the nature and chemical directionality of biological processes,” argued Dr. Gould. “However, elucidation of energetic principles applicable to the microscopic confines of organized states in vivo, demands that the usual thermodynamic analysis be supplemented with molecular details of the functional coupling,” that is, the binding of electrically charged water and/or cell solutes with each other, or with organelle. “*The reactive properties of the protein molecule,*” for example, “*suggest that enzymes are suited to function as field-effect electronic/protonic elements in the execution of chemical reactions.* It is quite plausible that, in many cases, the enzyme molecule not only connects the active center mechanically to the surroundings, but, also, protonically/electrically.”[Emphasis added.](Gould, 2003)

“Within the confines of a multienzyme structure, part of this energy may be retained within the protein superstructure and used in subsequent catalytic processes.” Dr. Gould added, reflecting on the Sacred Spiral of DNA, “the assembly geometry of alpha helices in protein molecules gives rise to quasi-spherical crystal-like . . . structures, which possess piezoelectric properties. Substrate-translocation, among interacting protein molecules in a multienzyme assemblage, may be facilitated by this kind of [electromagnetic] transduction.”(Gould, 2003)

Dr. Gould and others detailed the likelihood that nano-structured water was also capable of causing membranes to depolarize.

Resonance Shifts as a Disease Precursors

Studies with tritium have demonstrated ring water structures can penetrate the intestinal tract up to six times faster than distilled water. This, research indicates, introduces a significant number of water rings into blood streams for use in energetic, metabolic, and physiologic processes. Research ongoing at the time of this writing showed that water rings may enhance cell water turnover and intercellular communications.

Most importantly concerning the electrically-controlled generation of illness, Dr. Werner R. Loewenstein, working at the University of Miami School of Medicine, determined that cell communication systems, especially gap junctions, are among the most important factors in predisposing to chronic diseases. Reduced electrical conductivity and transmission from impaired or depleted water structures reduces intra and intercellular communications to pathological levels. Modern science has proved correct ancient Asian disease and healing beliefs—blocked energy signaling causes disease; restoring the energy flow promotes restoration of good health.(Gould, 2003)

Defective cell membranes, membrane channels, and gap junctions, as tiny as 2 billionths of a meter in length, have been shown to produce communication reductions. This apparently reflects the healthy/normal design of biology. When cell communication systems leak, or metabolism becomes depressed, gap junctions and ion channels heal, or seal, themselves. This inhibits further water ring loss, dehydration, and abnormal cell messaging. Abnormal waveforms of electricity in gap junctions cause cell water “freezing.” This blocks additional cell water movements according to research by Green and Lewis. Gould’s review concluded that increased cell water turnover may be a factor in accelerated healing.

Animal studies at the University Rene Descartes de Paris documented “significant increases in tissue healing time of external wounds” due to *abnormal* structured water levels.(Gould, 2003)

Generally accepted models of disease management prefer treating ailments following the expression of symptoms, that is, late in the disease process. These symptoms result from gross biochemical imbalances caused by myriad risk factors including environmental and lifestyle toxicities. These risks slowly but surely take their toll on health and energetic systems. By the time symptoms develop from pathologies, frank organic disease is commonly severe and/or widespread. This new knowledge offers a far more preventative and conservative alternative. "Preceding gross biochemical alterations," Dr. Gould summarized, "aberrant coherent information transfer would be taking place as a result of abnormally structured cell water multilayers." Employing Magnetic Resonance Analyzer (MRA) technology now offers non-invasive determinations of prepathological conditions. Disease process can then be accurately predicted or, better yet, prevented based on aberrant shifts in resonance data and resonance intervention.

Damaged DNA and the Body Electric

Given the preceding information, the genetic machinery of the cell, as mediated through structured water, controls the extracellular matrix (ECM), glycocalyx, cell membranes, cell membrane receptors, and intracellular macromolecular components. In essence, DNA electrodynamics determines everything living! And those who control it are, likewise, divinely empowered.

It is well known that the genetic machinery of cells can be altered to produce abnormal states by: hereditary factors; environmental factors such as viruses, heavy metal pollutants, toxic chemicals and pharmaceuticals, radiation from man-made or natural sources, free radicals, and/or age-accumulated errors in transcription. We now add dehydration, particularly structured water shortages, to this list of predisposing factors for gene-linked diseases. Most of the above genetically malevolent factors are man-

made risks upon which profitable industries are based. Some of the most lethal are rationalized using an illusion of public health. The structured-water-reducing harmful practices of water fluoridation and water chlorination are two examples.

Genetic abnormalities, man-made or otherwise, include DNA strand breaks, acquired dysfunction of DNA repair mechanisms, mutations in genes that drive cells to divide, mutations in genes that suppress cell division, and failure to properly code mRNA.

If improvements are made in gene function through genetic repair and/or removal of genetic toxins, the types of proteins, lipids, and carbohydrates manufactured by the cell will change as will health status.

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Chapter 9.

Pirates of the Sacred Spiral

“Power will gravitate into the hands of those who control information. . . . This will encourage tendencies through the next several decades toward a technotronic era, a dictatorship, leaving even less room for political procedures as we know them. . . . Finally, looking ahead to the end of the century, the possibility of biochemical mind control, and genetic tinkering with man, including beings which will function like men and reason like them as well, could give rise to some difficult questions.”

Zbigniew Brzezinski,

David Rockefeller protégé and
U.S. National security Advisor, Carter Administration,
from his book *The Technotronic Era*

The human mind is a malleable thing. What we believe, how we feel, our attitudes, and actions are largely determined by psychosocial conditioning often to the detriment of ourselves, society, and our spiritual evolution.

In ancient times our ancestors gathered ‘round elders and storytellers. They painted pictures with their words. Young and old learned history and common values. A set of shared beliefs emerged and continued to define the great cultures of civilization.

“Medicine” evolved likewise. In ancient times, wise ones and village healers spent lifetimes learning of nature’s healing gifts. Only a century ago medicine came from plants gathered mostly nearby and formulated into remedies. The “pharmaceutical laboratory” of that age was called the kitchen.

In recent decades, we have departed from being a people living in local communities, in close-knit families, subject to nature and our Creator, to become a global population of increasingly

independent individuals. Our new gods of science, technology, and money, political demagogues, and the state have taken the Creator's place in our mass mind and popular *culture*.

As our global culture progressed, so too did the oligarchs in the ruling class. They developed many new ways to manage subservient populations. Who are these people and what do they want? It certainly has something to do with genetics. Clearly, throughout history, there has been a small segment of the humanity that has been compelled to own, or at least control, everything and everyone. By strict definition, that is an *oligarchy*.

Webster's New World Dictionary (Third College Edition, 1988) describes an *oligarchy* as "a form of Government in which the ruling power belongs to a few persons; a state governed this way; the person ruling such as state." The root prefix of **oligo-** comes from the Greek *oligos*: small, akin to *loigos*: destruction, death; and *(o)leig-*: wretched, illness; and from the Lithuanian *lig'a*: disease.

As clinicians, health science researchers, and professional educators, it has amazed us that leading academicians, scientists, and healthcare providers, have remained generally ignorant of the widespread influence wielded by the Anglo-American banking, industrial, and academic/institutional ruling elite. Few today comprehend the extent to which the medicalpharmaceuticalgenetics cartel operates. The overwhelming influence that members of the global elite exercise over these vast industries is generally unknown. Through their foundations and allied institutions, the world's wealthiest families have asserted direction over the fields of public health, medicine, pharmaceuticals, and genetics for almost a century. Meanwhile, the virtual army of health professionals—people who, mostly for the love of humanity, endured years of dehumanizing indoctrination called "medical education," and paid dearly for their licenses and certificates remain politically unwitting. Are health scientists and care providers possibly pawns on global chess board?

To answer this question simply consider the source of our medical influence. It is widely known, worldwide, people have been heavily influenced, even entirely “brainwashed,” by pharmaceutical propaganda. These have routinely included claims made by esteemed scientists in reputable journals that have been, quite often, biased by pharmaceutical industry interests.

USA Today pierced this harsh reality in March 2000, when they questioned, “Who’s teaching the doctors?” The subheading answered thusly: “Drug firms sponsor required courses—and see their sales rise.”(Vergano, 2000)

For years, pharmaceutical advertising and marketing firms have been fully accredited as continuing medical education (CME) providers, and have virtually cornered the market in providing such “professional education.”

“It is unconscionable,” said the editor-in-chief of the *Journal of the American Medical Association*, Catherine De Angelis, as though her organization was beyond reproach. Marketing firms “advertise wares under the guise of medical education,” and doctors have blindly followed along.

“The drug companies provide ‘unrestricted’ grants to the marketers who hire the course faculty,” journalist Dan Vergano wrote. “But growing numbers of critics say there’s” something wrong with this influence. It amounts to professional brainwashing at worst and professional persuasion at best.

The *USA Today* article went on to explain how CME firms, “stack their programs with faculty physicians overly friendly to their sponsors’ products. Sponsors [then] get a chance to market their products directly to doctors in a venue disguised as education.”(Vergano, 2000)

Thus, by paving continuing education and academic pathways, and so subsidizing subscriptions to pharmaceutical industry established views, the global oligarchy’s influence in “public health” has been profound.

This chapter addresses genetics in health science, and focuses on the Rockefeller family's staggering influence in this field. Through their foundations, allied agencies, and respected institutions, this family, more than any other, has directed the paths of health science to their economic doorsteps. In light of this influence and coercion, members of the medical mainstream participate in a virtual Rockefeller-directed cult. Is it possible that allied geneticists, modern clinicians engaged in "gene-therapies," and DNA scientists at large, serve the forces of this one family more than any other? If this is true, then perhaps we should learn as much about this family's activities as we do about DNA.

Rockefeller Scientific Influence

Prior to World War II, America's scientific community generally frowned upon U.S. Government investments that implied potential biases in health science. Major financing and administration of medical research by federal agencies, in fact, had been generally opposed during peacetime. Only during wars did organizations like the National Academy of Sciences (NAS), or their National Research Council (NRC), receive major federal funding. Both the NAS, established during the Civil War, and its NRC, set up during the First World War, were largely organized to respond to wartime threats including infectious biologicals and toxic chemicals. (Starr, 1986) From at least the early 1900s, Rockefeller appointees and monies shaped these agencies and other leading health science institutions.

Naturally, little or no mention of this fact accompanies these organizations' literature. According to their promotions, the NAS is simply "a private, nonprofit, self-perpetuating society of distinguished scholars engaged in scientific and engineering research, dedicated to the furtherance of science and technology and to their use for the general welfare. Upon the authority of the charter granted to it by the Congress in 1863, the Academy has a mandate that requires it to advise the federal government on scientific and technical matters." (National Research Council, 2000)

Likewise avoiding direct mention of its Rockefeller influence, the NRC was effectively “organized by the National Academy of Sciences in 1916 to associate the broad community of science and technology with the Academy’s purposes of furthering knowledge and advising the federal government of the United States. Functioning in accordance with general policies determined by the Academy, the Council has become the principal operating agency of both the NAS and the National Academy of Engineering in providing services to the government, the public, and the scientific and engineering communities. The Council is administered jointly by both Academies and the Institute of Medicine.”(National Research Council, 2000)

Such details concerning most esteemed and influential scientific and medical institutions are relevant insofar as their conflicting roles in instituting less than humanitarian policies and programs. Many, and likely most, of these controversial undertakings have been officially rationalized by politicized threats to “national security” and “public health.” High among these concerns has been proliferating populations. Official solutions have included development of the most sophisticated population controlling technologies. Among these, genetically engineered biological weapons options have been exercised. Dr. Horowitz provided proof of this in *Emerging Viruses: AIDS & Ebola—Nature, Accident or Intentional?*, including figure 9.1 which showed a 1970 Department of Defense (DoD) appropriations request for \$10 million to genetically engineer new forms of biological weaponry. Its description and function was virtually identical to that requesting the development of HIV/AIDS. You will notice this effort, academically directed by the NAS-NRC, was initiated approximately 10 years prior to the emergence of the first HIV/AIDS cases.

Dr. Horowitz’s books and scientific papers showed definitive links between the individuals that oversaw this project and the testing of related contaminated hepatitis B vaccines. Much of this

evidence incriminates Rockefeller affiliated population controlling agencies and their chief administrators including Dr. Henry Kissinger. (See figures 9.2 and 9.3.)

Between 1900 and 1940, private foundations and universities financed most medical research. According to Paul Starr, author of *The Social Transformation of American Medicine: The rise of a sovereign profession and the making of a vast industry*, “the most richly endowed research center,” was the Rockefeller Institute for Medical Research, shown in Chapter 4 to be affiliated with Cold Spring Harbor (CSH) eugenics laboratory. The institute was established in New York in 1902 and “by 1928 had received from John D. Rockefeller \$65 million in endowment funds.” In contrast, as late as 1938, as little as \$2.8 million in federal funding was budgeted for the entire U.S. Public Health Service.

Therefore, it is easy to understand how the Rockefeller family came to influence, so heavily, health science, genetics, and contemporary medicine. Very simply, the Rockefeller family’s investments in these fields predated, and far surpassed, even the U.S. federal government’s. (Starr, 1982)

More than the New Deal, the Second World War created the greatest boom in federal government and private industry support for medical research. It was around this time that the Rockefeller family and their Standard Oil of New Jersey dynasty entered into a substantial partnership with IG Farben, the chemical/pharmaceutical cartel whose scientists, including German eugenicists then experimenting on Blacks in central Africa, made major advances in biological and chemotoxic warfare. Together with Farben, as discussed by Dr. Horowitz previously, the Rockefeller family invested heavily, along with the Royal Family of England, Prescott Bush, and other political notables, in forwarding the earliest “racial hygiene” eugenics experiments.

Fig. 9.1. Genetic Engineering of AIDS-like Bioweapon Advanced by NAS-NRC

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR 1970

SYNTHETIC BIOLOGICAL AGENTS

There are two things about the biological agent field I would like to mention. One is the possibility of technological surprise. Molecular biology is a field that is advancing very rapidly and eminent biologists believe that within a period of 5 to 10 years it would be possible to produce a synthetic biological agent, an agent that does not naturally exist and for which no natural immunity could have been acquired.

Mr. SIKES. Are we doing any work in that field?

Dr. MACARTHUR. We are not.

Mr. SIKES. Why not? Lack of money or lack of interest?

Dr. MACARTHUR. Certainly not lack of interest.

Mr. SIKES. Would you provide for our records information on what would be required, what the advantages of such a program would be, the time and the cost involved?

Dr. MACARTHUR. We will be very happy to.

(The information follows:)

The dramatic progress being made in the field of molecular biology led us to investigate the relevance of this field of science to biological warfare. A small group of experts considered this matter and provided the following observations:

1. All biological agents up to the present time are representatives of naturally occurring disease, and are thus known by scientists throughout the world. They are easily available to qualified scientists for research, either for offensive or defensive purposes.
 - * 2. Within the next 5 to 10 years, it would probably be possible to make a new infective microorganism which could differ in certain important aspects from any known disease-causing organisms. Most important of these is that it might be refractory to the immunological and therapeutic processes upon which we depend to maintain our relative freedom from infectious disease.
 - * 3. A research program to explore the feasibility of this could be completed in approximately 5 years at a total cost of \$10 million.
 4. It would be very difficult to establish such a program. Molecular biology is a relatively new science. There are not many highly competent scientists in the field almost all are in university laboratories, and they are generally adequately supported from sources other than DOD. However, it was considered possible to initiate an adequate program through the National Academy of Sciences-National Research Council (NAS-NRC).
- The matter was discussed with the NAS-NRC, and tentative plans were made to initiate the program. However, decreasing funds in CB, growing criticism of the CB program, and our reluctance to involve the NAS NRC in such a controversial endeavor have led us to postpone it for the past 2 years.
- * It is a highly controversial issue and there are many who believe such research should not be undertaken. It is to be noted that such research would involve the killing of large populations. On the other hand, without the sure scientific knowledge that such a weapon is possible, and an understanding of the ways it could be done, there is little that can be done to devise defensive measures. Should an enemy develop it there is little doubt that this is an important area of potential military technological inferiority in which there is no adequate research program.

The above \$10 million appropriations request for the development of a "method of massive killing of large populations," (i.e., a population control agent) was determined through Dr. Horowitz's research to have originated with Nelson Rockefeller's protégé, Dr. Henry Kissinger—National Security Advisor under Richard Nixon. At the same time, Kissinger had ordered the development of National Secret Security Memorandum (NSSM) 200 that called for massive Third World depopulation. The first congressional request for this action came a few months earlier from George H.W. Bush. Source: Department of Defense Appropriations for 1970. Hearings Before a Subcommittee of the Committee on Appropriations House of Representatives, Ninety-First Congress, Tuesday, July 1, 1969, Page 129 (never declassified). Washington: U.S. Government Printing Office,

Early History of American Public health

Prior to the Second World War, German models had heavily influenced American science and medicine. This precedent changed during the 1930s with the Rockefellers' heavy investment in the health sciences at a time when the Nazis were purging Jewish scientists from German universities and biological laboratories. These changes, according to Starr, significantly altered the course of American health science and medicine. Many of Germany's most brilliant Jewish researchers immigrated to the United States just as the movement burgeoned to privatize war related biological and medical research.(Starr, 1982)

In 1938, as many Jewish scholars emigrated to the United States, the National Institutes of Health (NIH) synchronously established residence in "a privately donated estate" in Bethesda, Maryland, which is still its home today. From here, grants and stipends were awarded to direct the paths of health science in America.

In this regard, the NIH—supposedly the most powerful and esteemed of all health science organizations—might be more honestly seen as a "cover organization," or "front" for its original benefactors, principle among them was the Rockefeller/IG Farben chemical-pharmaceutical, cancer, and eugenics cartel.

In this way, the Rockefeller/IG Farben medical-industrial complex was fully poised to influence, and take full advantage of, the U.S. Congress's "first series of measures to promote cancer research and cancer control."(Starr, 1982)

In 1937, new congressionally supported federal legislation authorized the establishment of the National Cancer Institute (NCI) under the NIH, and for the first time, "the Public Health Service (PHS) to make grants to outside researchers."(Starr, 1982)

According to Starr's chronology:

Fig. 9.2. U.S. Population Reduction Agenda

—A manifesto from Negative Population Growth, Inc.

Why We Need A Smaller U.S. Population And How We Can Achieve It

We need a smaller population in order to halt the destruction of our environment, and to create an economy that will be sustainable over the very long term.

We are trying to address our steadily worsening environmental problems without coming to grips with the root cause — overpopulation.

If present immigration and fertility rates continue, our population, now over 264 million, will pass 400 million by the year 2050 — and still be growing rapidly!

All efforts to save our environment will ultimately be futile unless we not only halt U.S. population growth, but reverse it, so that our population can eventually be stabilized at a sustainable level — far lower than it is today.

The Optimum U.S. Population Size

The central issue is surely this: At what size should we seek to stabilize U.S. population? Unless we know in what direction we should be headed, how can we possibly devise sensible policies to get us there?

The size at which our population is eventually stabilized is supremely important because of the effect of their numbers of people on such vitally important national goals as a healthy environment, and a sustainable economy.

We believe these goals can best be achieved with a U.S. population in the range of 125 to 150 million, or about its size in the 1940s. This optimum size could be reached in about three to four generations if we do two things now that are well within our grasp.

How To Get There

1. Impose restrictions on immigration that would halt illegal immigration, and cap legal immigration at not over 100,000 per year, including all relatives, refugees and anyone. That alone would sharply slow our growth.

2. Lower our fertility rate (the average number of children per woman) from the present 2.4 to around 1.5 and maintain it at that level for several decades. We believe that comprehensive financial incentives will be necessary in order to reach that goal.

If almost all women had no more than two children, our fertility rate would drop to around 1.5, because many women remain childless by choice, or choose to have not more than one child. We promote the ideal of the two-child maximum family as the social norm, because that is the key to lowering our fertility.

Incentives to Lower Fertility

NPG proposes these incentives to motivate parents to have no more than two children:

- Eliminate the present Federal income tax exemption for dependent children born after a specified date.
- Give a Federal income tax credit only to those parents who have not more than two children. Those with three or more would lose the credit entirely.
- Give an annual cash grant to low income parents who pay little or no income tax, and who have no more than two children. Those with three or more children would lose the cash grant entirely.

Two Vastly Different Paths Lie Before Us

With the reductions in immigration and fertility we advocate, our nation could start now on the path toward a sustainable, and prosperous, population of 125 to 150 million.

Without such a program, we are almost certain to continue our mindless, headlong rush down our current path. That path is leading us straight toward catastrophic population levels that can only devastate our environment, and produce universal poverty in a crowded, polluted nation.

To learn more about NPG's recommendation for programs designed to halt and eventually to reverse U.S. and world population growth, write today for our **FREE BROCHURE**.

NPG is a national nonprofit organization founded in 1973. We are the only organization that calls for a smaller U.S. and world population, and recommends specific, realistic measures to achieve these goals.

 **Negative Population Growth, Inc.**

P.O. Box 1286, 214 The Plaza, Suite 7K, Teaneck, NJ 07666

The above ad initially appeared in the March/April 1996 issue of *Foreign Affairs*, the esteemed political periodical published by the David Rockefeller-directed Council on Foreign Relations—a private organization that largely represents the interests of multinational corporations and the Anglo-American banking cartel. A nearly identical version of this paid editorial appeared on page 21 of the July 2003, issue of *Harper's* magazine. The ads, placed by Negative Population Growth, Inc., an offspring of the Population Council organized by the Rockefeller brothers in New York, called for approximately half of the American population to be eliminated through methods of population controls, that have been largely unsuccessful.

The war gave medical research priority. In July 1941 President Roosevelt created an Office of Scientific Research and Development (OSRD) with two parallel committees on national defense and medical research. The Committee on Medical Research (CMR) undertook a comprehensive research program to deal with the medical problems of the war. The work, costing \$15 million, involved 450 contracts with universities and another 150 with research institutes, hospitals, and other organizations. Altogether, some 5,500 scientists and technicians were employed in the enterprise. (Starr, 1982)

Cancer Investigations and Exterminations

Given its early heavy interest in cancer research and eugenics (as detailed more completely in Chapter 18 of Dr. Horowitz's *Death in the Air: Globalism, Terrorism and Toxic Warfare*), the Rockefeller Institute for Medical Investigations in San Juan, Puerto Rico, initiated a nightmarish series of human investigations. Inconceivable as this may seem, the "Puerto Rican Cancer Experiment," launched in 1931 by program director, Dr. Cornelius Rhoads, studied the purposeful injection of Puerto Rican natives with cancerous tissues to determine if cancer might be transmitted that way. (Horowitz and Martin, 1998)

The eugenics mindset permeated a letter to his colleague, obtained by the Puerto Rican Nationalist Party, in which Rhoads expressed his desire to rid the planet of the island's natives. The Puerto Ricans, he reported in his racist tirade, were "beyond doubt the dirtiest, laziest, most degenerate and thievish race of men ever inhabiting this sphere. It makes you sick to inhabit the same island with them."

Expressing his disappointment over the inefficacy of "public health" to deliver genocide to the people of Puerto Rico, the Rockefeller Institute medical director wrote, "What the island needs is not public health work, but a tidal wave or something to totally exterminate the population. It might then be livable."

He concluded his letter by proudly confessing to his serial murders: "I have done my best to further the process of extermination by killing off eight and transplanting cancer into several

Fig. 9.3. Population Council's Birth Control Pill RU-486

The image shows the cover of TIME magazine from October 5, 2000. The word "TIME" is at the top in large, bold letters. Below it, the date "OCTOBER 5, 2000" and the price "\$3.95" are visible. A diagonal banner in the top right corner reads "CELL PHONE SAFETY RATINGS RADIOHEAD REVIVES ROCK!". The main headline is "The ABORTION Pill" in large, bold letters. Below the headline, a hand is shown holding a small white pill with "RU-486" printed on it. To the left of the hand, the text reads: "It's finally here. But it's not as easy as it looks. Here's how it works and what it means." A barcode is located in the bottom left corner. At the bottom of the cover, there is a small line of text: "www.time.com AOL Keyword: TIME".

What do you do when you "86" something? You trash it, or get rid of it. Are you for 86-ing life? Or "RU 486"—the "Abortion Pill?" This *TIME* magazine feature explains this birth control pill is owned and licensed by "The Population Council," that is, the Rockefeller-directed political organization advancing and promoting global depopulation. Source: Horowitz, LG. *Death in the Air: Globalism, Terrorism and Toxic Warfare*, videotaped lecture presentation, Sandpoint, Idaho, 2001.

more. The latter has not resulted in any fatalities so far. . . . The matter of consideration for the patients' welfare plays no role here—in fact, all physicians take delight in the abuse and torture of the unfortunate subjects.”(Horowitz and Martin, 1998)

Dr. Rhoads, rather than being held accountable for his crimes against the people of Puerto Rico, was awarded the Legion of Merit, and then appointed to the staff of the Rockefeller-directed U.S. Atomic Energy Commission (AEC). This was during the 1950s when the commission was carrying out radiation experiments on unwitting hospital patients, mentally retarded children, prisoners, American soldiers, and according to more recent admissions, almost a third of the population of the United States.(Horowitz and Martin, 1998)

The AEC was intimately involved in the NCI's Special Virus Cancer Program—a cancer virus research program during which numerous AIDS-like and Ebola-like viruses were bioengineered during the 1960s and early 1970s. Their “Joint AEC–NCI Molecular Anatomy Cancer Program,” directed by Dr. Norman Anderson, extensively studied “human embryo tissues during early and mid-gestation.” Anderson, and a host of AEC and NCI researchers injected human fetal specimens with various viral mutants in an effort to develop cancers and related vaccines allegedly for prevention. With current skyrocketing rates of cancer, we wonder if it was population growth prevention they were really after. Among their major findings, announced in a 1971 Department of Health, Education and Welfare (DHEW) publication, was that by bombarding fetuses with ionizing radiation, the researchers were able to cause tumor-like reactions later in life. Wisely, they withheld reporting where their human trials were being carried out.(Horowitz and Martin, 1998)

More incriminating cancer studies conducted by AEC officials, included the development of airborne viruses that transmitted cancer and other immune system related disorders by sneezing.(Horowitz and Martin, 1998)

The Rhodes–Rothschild–Rockefeller Connection

Digressing a moment for pertinent historic detail, the surname Rhoads or Rhodes are both suspiciously related to Rockefeller money and contemporary acts of genocide. Though the potential blood relationship between Cornelius Rhoads and Cecil Rhodes is not out of the question, given the cryptocracy's practice of changing names slightly to protect their guilty, there is a political, economic, and ideological kinship between these two men. John Cecil Rhodes, from whom the Rhodes Scholarship was named, had, like Cornelius, no qualms about conducting genocidal operations in Third World nations. The British diamond magnate did so to further his colonialistic intentions. Curiously, Dr. Rhoads's financial support for genocidal cancer experiments in Puerto Rico derived, at least historically, from John Cecil Rhodes's funding of the Rothschild–J.P. Morgan–Rockefeller banking axis. What follows are some relevant facts:

Frank Aydelotte, American Secretary to the Rhodes Trustees, recalled that, "In 1888 Rhodes made his third will . . . leaving everything to Lord Rothschild"—his mining enterprise financier.

Later, for strategic reasons, Lord Rothschild's son-in-law, Lord Rosebury, replaced his elder as Rhodes's final heir.

Professor Carroll Quigley—President Clinton's teacher and mentor at Georgetown University during the mid-1960s—explained that these financial elitists maintained global colonialism among their highest aspirations. In order to accomplish this, secret societies were established and administered largely on behalf of the Rothschild and Rhodes dynasties. The secret societies in which they invested had inner member structures that were shielded by successively larger outer circles. The central part of the structure was established by March, 1891, using Rhodes's money. Rothschild trustee Lord Alfred Milner directed the organization that was called "The Round Table." This organization "worked behind the scenes at the highest levels of British government, influencing foreign policy and England's involvement

and conduct during WWI” and later WWII.(van Helsing, 1995; Quigley, 1966) This knowledge is relevant to revelations in the next chapter discussing the Human Genome Project heist.

According to secret society investigator and author Jan van Helsing, the British Secret Intelligence Service (MI6) evolved largely from efforts of members of the Committee of 300 and The Round Table. Other sources have reported that MI6 has exercised far greater worldwide control than most people realize. More wiretaps in the United States, for instance, have been administered on behalf of MI6 than the CIA. In this regard, investigators John Loftus and Mark Aarons reported that, “for the last fifty years, virtually every Jewish citizen, organization, and charity in the world has been the victim of electronic surveillance by Great Britain, with the knowing and willing assistance of the intelligence services of the United States.”(Loftus, 1994)

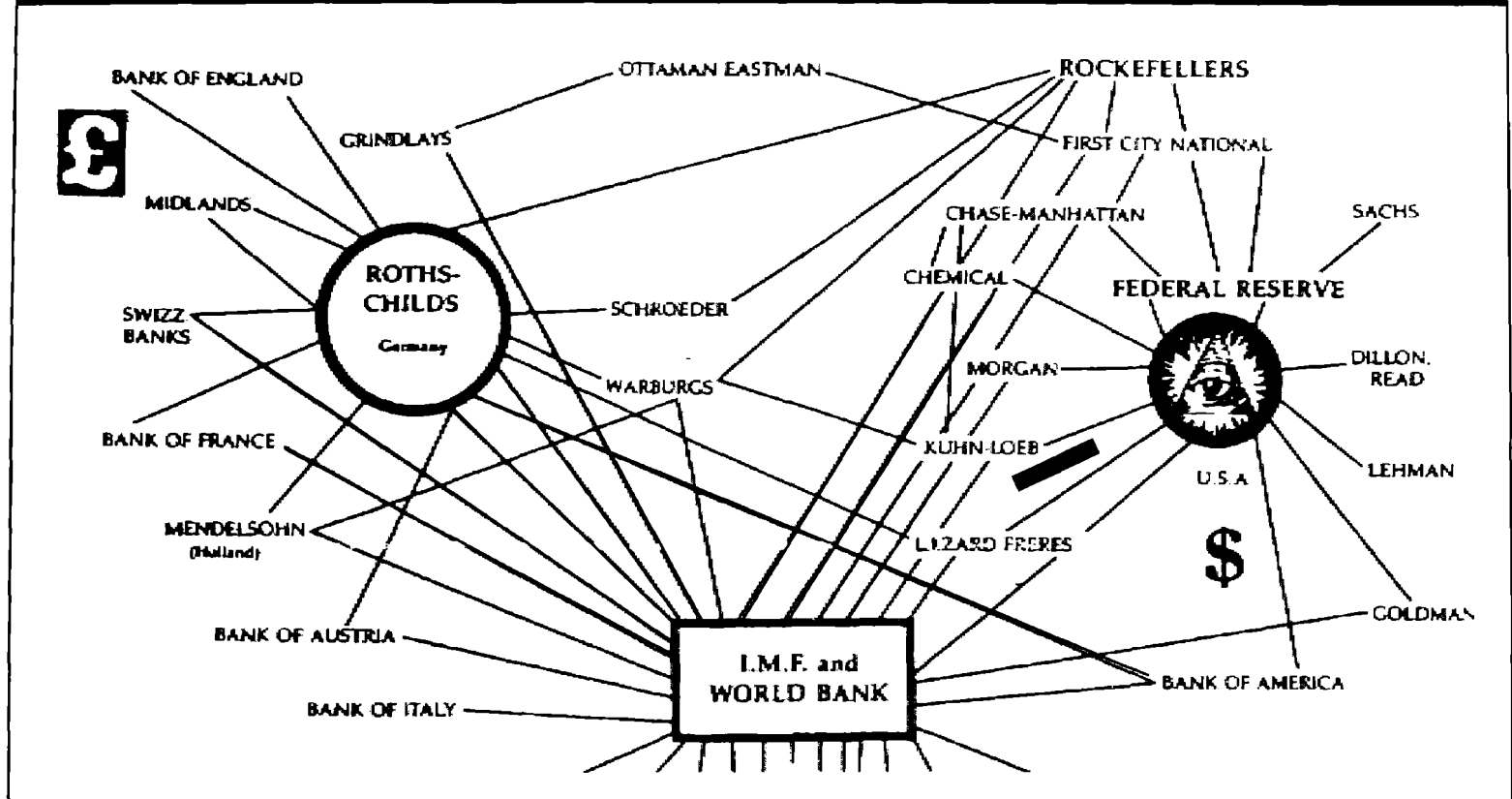
To set the stage for the first World War, The Round Table directors developed the “Royal Institute for International Affairs,” or RIIA. It was also known as “Chatham House,” and had among its members Lords Albert Grey and Arnold Toynbee. The latter was known as the *éminence grise* (i.e., gray eminence; one exercising unsuspected power) of MI6.(van Helsing, 1995; Quigley, 1966)

Apparently, the secret Masonic society influence in the affairs of the world’s leading intelligence organization has been striking and esoteric. Even the name “MI6” reflected knowledge of the ancient mystical arcana, as Dr. Horowitz explained in *Healing Codes for the Biological Apocalypse*.

It was Lord Toynbee of the MI6 who, following “brainstorming” sessions conducted at the Wellington House into ways to condition the public into accepting World War I, delivered the marching orders.

Another leading committee member, Lord Rothmere, used his newspapers to test the Wellington House “social conditioning” strategies. Following a six-month test period, it was learned

Fig. 9.4 The International Banking and Monetary Fund Direc-



that eighty-seven percent of the public had formed their opinions without using critical or rational judgment—the intended result. Thereafter, the English working class, according to van Helsing, “was subjected to sophisticated propaganda methods to convince them that they had to send their sons by the thousands to their deaths” in WWI.

In response, Teddy Roosevelt, the 26th President of the United States, complained during his 1912 election campaign, “Behind the visible government there is an invisible government upon the throne that owes the people no loyalty and recognizes no responsibility. To destroy this invisible government, to undo the ungodly union between corrupt business and corrupt politics is the task of a statesman.”(van Helsing, 1995)

More Background on Genetic Pirates and Bankers

The solidification of this “shadow government” in America began in 1776 around the time Adam Weishaupt established the Order of the Bavarian Illuminati on behalf of the European Rothschilds. (van Helsing, 1995)

Although early American political leaders Benjamin Franklin and Thomas Jefferson heavily favored private centralized banking, in 1790 Alexander Hamilton was appointed secretary of the treasury, and reformed policy heavily favoring his silent benefactors, Mayer Amschel Rothschild and his sons. A year later, Hamilton established the “First National Bank of the United States” fashioned after the “Bank of England.” The Rothschilds controlled both.(van Helsing, 1995)

After Mayer Rothschild’s death in 1812, Nathan Rothschild took control over the family fortune and opened the “Nathan Mayer Rothschild & Sons Bank” in London, Vienna, Paris, and Berlin. In America it was represented by J. P. Morgan & Co., August Belmont & Co., and Kuhn Loeb & Company.(van Helsing, 1995)

During the American Civil War, the Rothschilds financed both sides of the conflict. “The reasons leading to this civil war,”

van Helsing wrote, “were almost completely due to the actions and provocations of Rothschild agents.” One of the troublemakers, founder of the “Knights of the Golden Circle,” was George Bickley. Bickley extolled the advantages of succession from the Union by the Confederate States. On the other side, the Rothschild–J. P. Morgan and August Belmont banks financed the Union. In addition, Rothschild’s London bank supported the North, while its Paris bank funded the South. It was a glorious business.

President Lincoln finally caught wind of the scam and withheld immense interest payments to the Rothschilds. He then petitioned Congress to print “greenbacks”—dollars over which only the Union held printing power. In response, the furious Rothschilds are believed to have arranged his assassination. John Wilkes Booth murdered Lincoln on April 14, 1865. Booth was freed from jail due to the efforts of the Knights of the Golden Circle. He spent the duration of his days living comfortably in England, funded by the Rothschilds.

By the early 1900s, the international banking community held a stranglehold on America’s leading social, economic, and political institutions, including its medical scientific institutions.

In 1913, American banking mogul William Averell Harriman, cited earlier along with Andrew Carnegie and Percy Rockefeller as principle eugenics movement contributors, was initiated into the Skull & Bones fraternity. During the “Roaring Twenties” Harriman became the chief Western financier of the Russian government and their Ruskombank—where Max May, a Skull & Bones brother of Harriman, was vice-president. May was simultaneously vice-president of the Guaranty Trust Company controlled by J. P. Morgan and by extension the Nathan Mayer Rothschild Bank. Other Skull & Bones members partnered with J. P. Morgan at that time included Harold Stanley and Thomas Cochran. The capital used to create the Guaranty Trust came from the Harrimans, Rockefellers, Vanderbilts, and Whit-

neys—all families that favored the eugenics agenda with blood kin in the Skull & Bones.

Percy Rockefeller represented his family's interest in the Skull & Bones as well as Guaranty Trust, which he directed from 1915 to 1930. Rothschild and Bavarian Illuminati representatives helped establish the Rockefeller's European Standard Oil empire as well as Carnegie's steelworks and Harriman's railroad. The economic result of these investments and associations is diagrammed in figure 9.4 depicting the international banking community.

The "Skull & Bones," also known as the "Jolie Rogue," or "Jolly Roger," is by design the identifying symbol of pirates. The story of this symbol's evolution from elements chosen by the world's most powerful bankers is summarized in figure 9.5 and 9.6.

The introduction of the "Federal Reserve System" in 1913 enabled the international bankers to consolidate their American financial powers. Banking chiefs, who were largely supported by the Rothschilds, became the chairmen of the first Federal Reserve Bank of New York.

Following passage of "The Federal Reserve Act," Warburg conspired with others in the U.S. Congress to illegally ratify the 16th Amendment to the Constitution after which Congress deemed it necessary to levy personal income taxes on American citizens. The legislation was required since the United States government could no longer print money to finance its operations due to the controlling forces of the international banking cartel.

Opposition to these fiscal policies came, but was grossly inadequate to quell the changing tide. U.S. Congressman Louis McFadden expressed the sentiments of too few when he decried, "We have in this country one of the most corrupt institutions the world has ever known. I refer to the Federal Reserve Board and the Federal Reserve Bank, hereinafter called the FED. They are not government institutions. They are private monopolies which

prey upon the people of these United States for the benefit of themselves and their foreign customers. . . .”(McLamb, 1996)

With No Apologies: The Personal and Political Memoirs of U.S. Senator Barry Goldwater expressed the insider’s view that The Round Table’s cover organization, the Council on Foreign Relations, the CFR, tightly controlled the American political scene with Rockefellers at the helm. “I believe the Council on Foreign Relations and its ancillary elitist groups [referring to the other “secret societies” such as the Skull & Bones] are indifferent to communism. They have no ideological anchors. In their pursuit of a New World Order they are prepared to deal without prejudice with a communist state, a socialist state, a democratic state, monarchy, oligarchy—it’s all the same to them.”(Goldwater, 1979)

Rear Admiral Chester Ward of the U.S. Navy, a sixteen-year veteran of the CFR warned, “The most powerful clique in these elitist groups have one objective in common—they want to bring about the surrender of the sovereignty and the national independence of the United States.”¹⁶

“. . . Their rationale rests exclusively on materialism,” Senator Goldwater added. “When a new president comes on board, there is a great turnover in personnel but no change in policy. For instance, during the Nixon years,” CFR member and Nelson Rockefeller’s protégé, Henry Kissinger, was in charge of foreign policy. “[Next,] when Jimmy Carter was elected, Kissinger was replaced with Zbigniew Brzezinski, CFR member and David Rockefeller’s protégé.”(Goldwater, 1979)

On February 18, 1991, President George H.W. Bush, past CIA director, former CFR chief, with membership in the Skull & Bones, Committee of 300, and its offshoot—The Bilderbergers, addressed the American people during his State of the Union address. “It is big,” he said. “A New World Order, where diverse nations are drawn together in common cause . . . Only the United States has both the moral standing and the means to back it up.”(The Publishers, 1991)

Fig. 9.5. Evolution of the Skull and Bones Emblem



Pictured is Jacques de Molay, Grand Master of the Knights Templar in the late twelfth century, wearing the original "Jolly Roger," or the French name for the red cross flag, the "Jolie Rouge." The symbol was first used by a French order of militant monks known as the "Poor Soldiers of Christ and the Temple of Solomon," later known as the Knights Templar.

The Templars, were originally pious men. They were also ferocious warriors; pitching themselves into the midst of their enemies astride charging warhorses. Against incredible odds they fought like men possessed, either prevailing in their cause, or suffering death under the banner of

Gol'gotha, the place of the skull, where their Christ died, symbolized by the red cross.

They were initially dedicated to the protection of travelers and pilgrims of all religions, though they themselves were Christians. They were great statesmen, politically adept economic traders, and they were allied with the great sailor-fraternity that had created a worldwide trading empire in Phoenician times. They became immensely powerful, had the largest fleet and the most successful banking system in Europe.

They were eventually driven from the Holy Land by Saladin, their Moslem adversary, in 1291. They continued to fight for their cause on the high seas, and later elsewhere.

The best known Templar pirate ship was the *Falcon*, "the greatest that had been built at that time." She was in the harbor when the fortress of Acre fell "and rescued many noble-persons with great treasure, evacuating them to Atlit."

The Templars then retreated to their Mediterranean island bases on Cyprus, Rhodes, and Sicily. Together with the Order of St. John, later renamed the Knights of Malta, they remained the foremost maritime powers in the Mediterranean, continuing to effectively wage war on Moslem shipping, while conducting world trade.

The Templars were very powerful when jealousy and covetousness reigned in the early 14th century. Phillip IV, who was deeply in debt to the Order, had seen their treasures stored in Paris, and designed to make them his. On Friday October 13th 1307, the reason for which Friday the 13th has become known as an unlucky day, King Phillip IV, together with Pope Clement V, ruthlessly suppressed the Order throughout Europe with false accusations, arrests, torture, and executions.

A large number of Templars escaped that day to an uncertain future, and found refuge abroad. On the eve of the arrests, the entire Templar

fleet mysteriously vanished from the port of La Rochelle carrying with it a vast fortune, the fate of which remains a mystery to this day.

Wanted by the Pope and all the crowns of Europe, the Templars came to be viewed by the "comfortable folks" on the mainland as pirates.

The Templars finally found sanctuary in Scotland where Templar graves bear witness to them having lived and died there in the fourteenth century. King Robert the Bruce had no interest in persecuting the Order. To the contrary, he took advantage of their fugitive status, offering them asylum in return for their help in his war for independence against King Edward II of England.

There is also evidence that the Templar fleet traveled to North America in 1398 with the Sinclairs (almost 100 years before Columbus, whose boat also heralded the same red cross on its sail). Some settled there, at least temporarily. The Sinclairs (or Saint-Clairs) castle near Edinburgh was situated next to Rosslyn chapel, which was constructed by the Sinclairs according to the floorplan of Solomon's original temple. Engraved in the masonry around the chapel are maize and aloe plants, which grew only in North America.

Throughout Scotland, as well as within Rosslyn Chapel, there are carvings and tombstones dating back to the 15th, 16th, and 17th century using combinations of Templar imagery (skull and crossbones, Templar swords, Templar crosses) and Masonic symbols (compass and square). Additional members from the Stuart royal house became one of Freemasonry's biggest supporters during their reign of Scotland and England.

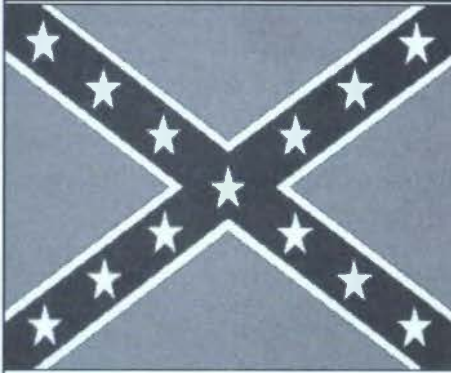
Many rituals used in modern Freemasonry have their origins in ancient texts discovered by the Templars in the ruins of Solomon's Temple, including Pythagorean math and metaphysical documents. Much of this relates to suppressed knowledge concerning sacred geometry impacting various aspects of science from water structuring and the numerical frequencies of the color spectrum to creationistic theories and genetic expression.

By the 17th and 18th centuries, the skull and cross- bones was a symbol with a powerful reputation but identified with no official organization. The Templars had long since gone underground and evolved into other organizations. The symbol was usurped and came to be associated with the pirates of which we are more familiar. They changed the flag to suit their needs replacing the crossbones with swords, adding hour-glasses or other symbols. The adaptation by the Ku Klux Klan of this symbol is depicted here.

Source: William of Tyre and staff: <http://skullandcrossbones.org/articles/jolly-roger.htm>



Fig. 9.6. Disguising the Cross & Bones Emblem



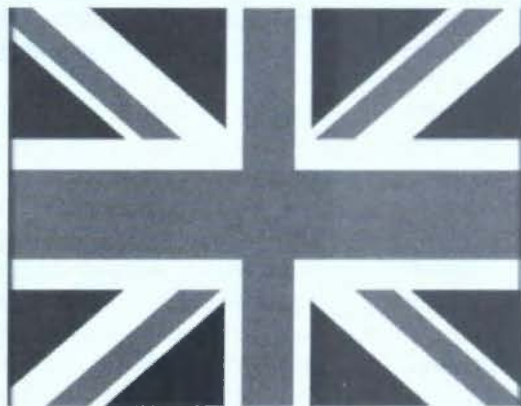
The Southern Cross of the Confederacy reflects the cross bones of its heritage. Historians agree the American Civil War was largely financed and instigated by Europe's banking elite and British royalty. Banks controlled by the Rothschild family financed both sides of the conflict. Rothschild agent was George Bickley, founder of the Freemasonry-linked "Knights of the Golden Circle," extolled the advantages of succes-

sion from the Union by the Confederate States.

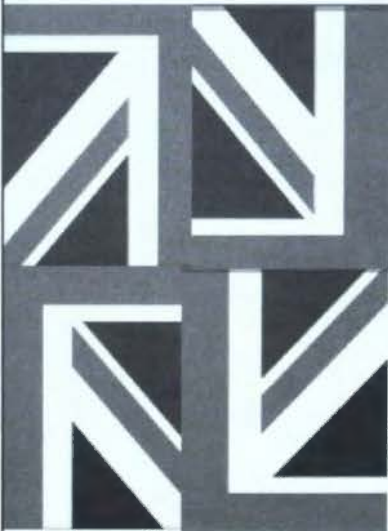
The Rothschild's

London bank supported the North, while its Paris bank funded the South.

The British flag, likewise, displaying the crossbones symbol, more prominently projects the Knights Templar ordained "Jolly Roger," red cross, or "Union Jack." Reflecting on the Templars' and pirates domination at sea, the Southern Cross flag was that of their Confederacy's Navy.



The mysterious disappearance of the great Templar fleet and banking dynasty fuels speculation that the Skull & Bones fraternity-linked Rothschild family remains greatly empowered today. It financed the American Rockefeller banks that secured Hitler's rise to power, and industrially supported both American and Third Reich operations during World War II.



The British Royal flag also subtly expresses secreted knowledge of sacred geometry depicting the "Sacred Four Great Forces" of early Naacal teachings. The original cross, among the earliest of Naacal symbols, can be found in their 70,000 year old writings.

When England's emblem is cut into quarters, with each quarter rotated 90 degrees (or a quarter turn), it yields the infamous swastika adapted for use by the Nazis. (Churchmaid J. *The Sacred Symbols of Mu*. London: Neville Spearman, Ltd., 1960 pp. 72-79.)

Pioneering the Fields of Cancer and Eugenics

Following the Rothschilds' early financial backing, the Rockefellers exercised significant control over American banking, medicine, and public health. This control was facilitated by the foundations established to promote New World Order objectives.(Brown, 1979) These included population management through genetics, eugenics, and cancer.

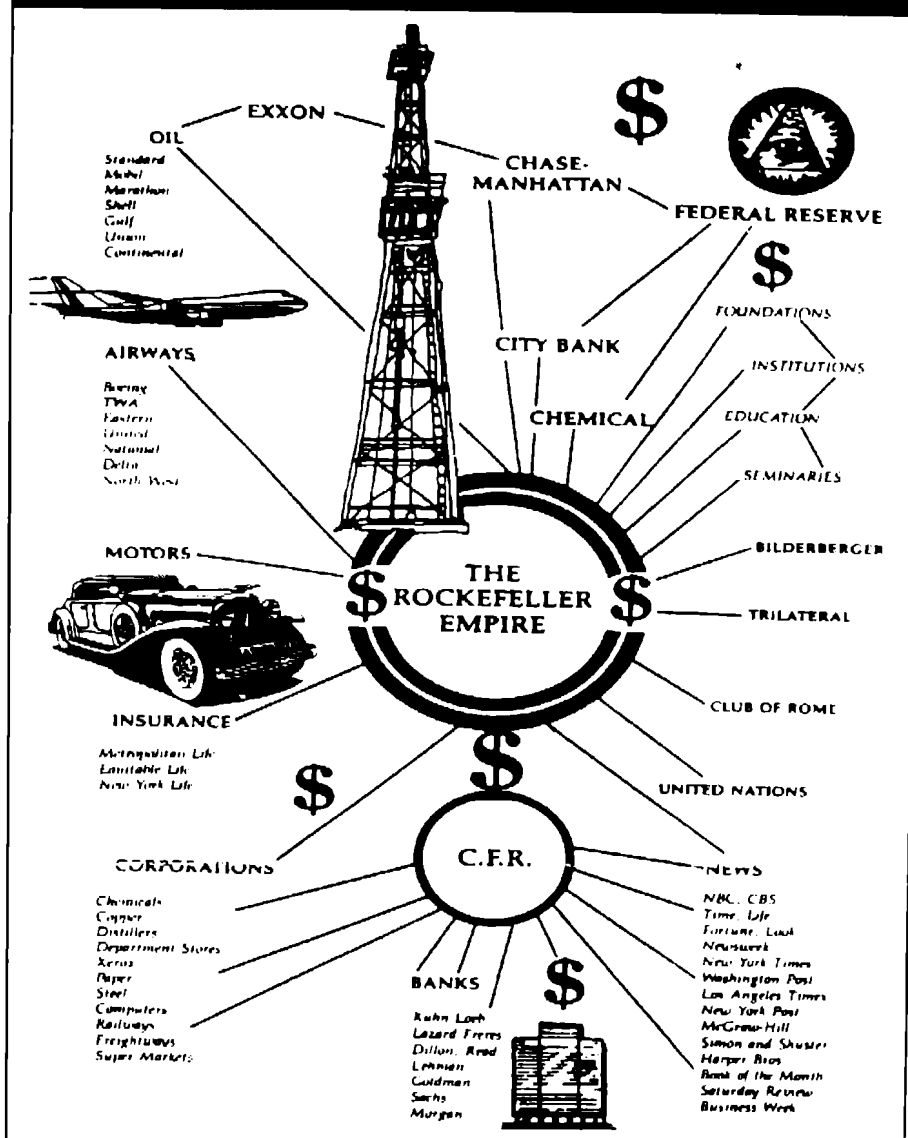
In *Emerging Viruses: AIDS & Ebola—Nature, Accident or Intentional?*, the intimate connections between the Rockefeller family and the funding and administration of the Rockefeller Foundation, Alfred P. Sloan Foundation, and the Sloan–Kettering Memorial Cancer Center were vigorously scrutinized.

Further implicating the Rockefeller/Farben military–medical influence in the development of the cancer industry was the recognition that mustard gas—the ethylene derived nerve gas widely used during WWI responsible for killing millions—was what Sloan researchers used to develop the first cancer chemotherapeutic agent. Likewise, the petrochemical industrialists managed by the Rockefeller/Farben cartel produced the earliest nerve gases.

Author Joseph Borkin also made this association very clear in *The Crime and Punishment of I.G. Farben: The Unholy Alliance Between Hitler and the Great Chemical Combine*. Tabun, code named “N-Stoff,” a nerve gas “so deadly that a drop on the skin killed a victim in minutes, . . . as well as Sarin, a companion nerve gas, had been discovered during I.G. Farben research and development on pesticides . . .” It became “one of Germany’s most closely guarded military secrets,” intimately shared by Rockefeller Standard Oil officials before WWII.(Borkin, 1997)

Although most historians reported that the Germans had sole access to the technology needed to develop these nerve gases, the Rockefeller family and their Standard Oil Company were undoubtedly privy to these developments, and profited greatly, as I.G. Farben’s partner, by their trade.

Fig.9.7. The Rockefeller's Financial Empire



Secretary of the Treasury, Alexander Hamilton, established banking policies favoring his silent benefactors Mayer Amschel Rothschild and his sons. He then established the "First National Bank of the United States" fashioned after the "Bank of England," under Rothschilds' control. The Rothschild & Sons Bank then principally established J. P. Morgan & Co., August Belmont & Co., and Kuhn Loeb & Company. The Guaranty Trust Company was controlled by J. P. Morgan and, by extension, the Rothschild Bank in partnership with the Harrimans, Rockefellers, Vanderbilts, and Whitneys—all families with blood kin in the Skull & Bones and other secret societies. Rothschild also helped establish the Rockefeller's European Standard Oil empire. The introduction of the "Federal Reserve System" in 1913 enabled these international bankers to consolidate their powers. Banking chiefs, who were largely supported by the Rothschilds and Rockefellers, became the first directors of the Federal Reserve Bank of New York.

Another distinguished investigator, G. Edward Griffin, reported in *World Without Cancer*, the Rockefeller's Chase Manhattan Bank had been "the principal stock registrar for Farben-Rockefeller enterprises such as Sterling Drug, Olin Corporation, American Home Products, and General Aniline and Film. When Farben's vast holdings were finally sold in 1962, the Rockefeller group was the dominant force in carrying out the transaction."(Griffin, 1997)

Rockefeller entry with I.G. Farben into the pharmaceutical field was concealed, Griffin reported, for at least two reasons: "One is the fact that, for many years before World War II, Standard Oil had a continuing cartel agreement not to enter into the broad field of chemicals except as a partner with I.G. Farben which, in turn, agreed not to compete in oil. The other is that, because of the unpopularity of Farben" in America, and "its need to camouflage its American holdings, Standard had concealed even its partnership interest in chemical firms behind a maze of false fronts and dummy accounts."(Griffin, 1997)

Griffin further detailed the Rockefeller group's "pyramid of power" through which international corporate control was exercised. As figure 9.7 indicates, the Rockefellers placed influential managers atop a vast number of companies and industries.(Griffin, 1997)

Rockefellers and Eugenics

Beyond the disclosures in Chapter 4, German scholar Stephan Kühl contributed much in *The Nazi Connection: Eugenics, American Racism and German National Socialism*. According to Kühl, prior to WWII, underlying the close working relationship "between the German and American governments was the extensive financial support of American foundations for the establishment of eugenic research in Germany." The main supporter of this was "the Rockefeller foundation in New York."

Kühl determined the Rockefellers “financed the research of German racial hygienist Agnes Bluhm on heredity and alcoholism in early 1920.” By early 1927, “the Foundation began supporting other German eugenicists, including Hermann Poll; Alfred Grotjahn, and Hans Naetsheim. The Rockefeller Foundation played the central role in establishing and sponsoring major eugenic institutes in Germany, including the Kaiser Wilhelm Institute for Psychiatry and the Kaiser Wilhelm Institute for Anthropology, Eugenics, and Human Heredity.”(Kühl, 1994)

Kühl, a sociologist and historian at the University of Bielefeld in Germany further chronicled the Rockefeller connection to Hitler’s racial hygiene program this way:

In 1918, German psychiatrist Emil Kraepelin founded the Institute of Psychiatry in Munich, which was taken over by the Kaiser Wilhelm Society in 1924. Ernst Rüdin, later director of the Institute for Psychiatry, headed the Department of Genealogy and Demography. This department—the core of the Institute—concentrated on locating the genetic and neurological basis of traits such as criminal propensity and mental disease [along with social psychology and herd mentality]. In 1928, the Rockefeller Foundation donated \$325,000 for the construction of a new building. The funding of the Institute in Munich was a model that other American sponsors followed. Ironically, the Institute continued to be supported by the money of the Jewish philanthropist James Loeb until 1940.

The actual building of the Kaiser Wilhelm Institute for Anthropology, Eugenics, and Human Heredity in Berlin was also partially funded by money from the Rockefeller Foundation. . . . The Institute concentrated on a comprehensive project on racial variation as indicated by blood groups, and on twin studies, coordinated by Otmar Freiherr von Verschuer. When severe financial problems threatened to close the Institute during the early years of the Depression, the Rockefeller Foundation kept it afloat. At several points, the Institute director, Eugen Fischer, met with representatives of the Foundation. In March 1932, he wrote to the European bureau of the Foundation in Paris, requesting support for six additional research projects. Two months later, the Rockefeller Foundation answered affirmatively. The Foundation continued to support German eugenicists even after the National Socialists had gained control over German science.(Kühl, 1994)

“By 1930, the United States and Germany had surpassed Great Britain as the leading forces of the international eugenics movement,” Kühl reported. Around that time, Ernst Rüdin took control over the International Federation of Eugenic Organizations (IFEEO), whose major administrative offices included “the Eugenics Record Office and the Station for Experimental Evolution in Cold Spring Harbor,” New York.(Kühl, 1994)

The Secret War Against the Jews

According to authors John Loftus and Mark Aarons, the Rockefellers were principle players in *The Secret War Against the Jews*. “All through the war,” they reported, “at least while [Nelson] Rockefeller was in charge” of the Office of Inter-American Affairs—the main foreign intelligence gathering and disseminating body—the Germans received everything they requested, “from refueling stations to espionage bases.” Alternatively, the British “had to pay in cash. Behind Rockefeller’s rhetoric of taking measures in Latin America for the national defense stood a naked grab for profits. Under the cloak of his official position, Rockefeller and his cronies would take over Britain’s most valuable Latin American properties. If the British resisted, he would effectively block raw materials and food supplies desperately needed for Britain’s fight against Hitler.”(Loftus, 1994)

Loftus and Aarons credited the close relationship the Rockefellers maintained with I.G. Farben for their preferential treatment of Hitler over Churchill:

The Rockefellers just happened to own the largest stock in Standard of New Jersey and were then in partnership with the Nazi-controlled I.G. Farben, which held the second largest share of the Rockefeller-controlled oil company, to develop synthetic gas and rubber. The sources among the former intelligence officers whom we interviewed on the Rockefellers say that the family was in complete agreement with the Dulles brothers and Forrestal on the question of preserving U.S. profits, no matter who won the war.(Loftus, 1994)

“In 1936,” these authors recalled, “the Rockefellers entered into partnership with [Allen] Dulles’s Nazi front, the Schroder Bank of New York, which . . . was a key institution in the Fascist economic ‘miracle’” for which Hitler was credited. In 1939, “the Rockefeller-controlled Chase National Bank secured \$25 million for Nazi Germany and supplied Berlin with information on ten thousand Nazi sympathizers in the United States. Except for a few months interruption, the Rockefeller-owned Standard Oil Company shipped oil to the Nazis through Spain all throughout the war. . . .”(Loftus, 1994)

These investigators judged “the roster of the Rockefeller’s known pro-Nazi behavior” as “horrendous.” They noted Senator Harry Truman’s description of the Rockefellers’ company behavior as “treasonous.” Indeed, under the U.S. Constitution, it was. “On September 22, 1947,” Loftus and Aarons chronicled, Federal Judge Charles Clark issued an opinion against the Rockefellers in a civil case brought against Standard Oil. He stated that the company “can be considered an enemy national in view of its relationship with I. G. Farben after the United States and Germany had become active enemies.”(Loftus, 1994)

Two months later, merely days before the Rockefeller-controlled United Nations voted on the question of a Jewish “promised land,” David Ben-Gurion, and other Jewish intelligence officers, entered Nelson Rockefeller’s office. They “arrived with their dossier” of incriminating proof that he had personally “committed treason against the United States of America. . . . They had his Swiss bank records with the Nazis, his signature on correspondence setting up the German cartel in South America, transcripts of his conversations with Nazi agents during the war, and finally, evidence of his complicity in helping Allen Dulles smuggle Nazi war criminals and money from the Vatican to Argentina.” Loftus and Aarons documented all of this. “It was the perfect moment for blackmail. . . ,” they wrote, and that was the antecedent that prompted Rockefeller to direct the decisive South American vote to form the State of Israel.(Loftus, 1994)

Figure 9.7 provides a graphic representation of “The Rockefeller Empire,” its relationship to the CFR, other more secretive global organizations, and a few of its corporate/industrial holdings.

Kaiser Permanente and “Non-lethal” Ethnic Cleansing

One might ask, “Who was Kaiser Wilhelm, and why had the Rockefeller family invested so heavily in a eugenics institute given his name? Further, what, if any, relationships remain in contemporary medicine and public health which reflect these original institutions and their mission to direct global ‘racial hygiene’?”

More than other European royalty, Kaiser Wilhelm II of Germany was widely known for his “saber rattling” and war mongering. Kin within Europe’s oligarchy, he was crowned Emperor in 1888 and died in 1941. King Frederick III of Prussia was his father, and Queen Victoria of Britain was his grandmother. King Edward VII of England was his uncle, and King George V, his cousin. He was born genetically handicapped with a withered left arm, and quickly developed, “a military lifestyle. He loved his numerous uniforms and surrounded himself with the elite of German military society.”

In 1900, according to recently released, previously secreted documents, the Kaiser developed a sophisticated war plan to conquer the United States.

In Dr. John Coleman’s expertly documented, highly detailed, and often cited book, *Conspirator’s Hierarchy: The Story of the Committee of 300*, Kaiser Industries was obviously linked to English and German royalty. Dr. Coleman explained the business relationship between Kaiser Industries and the Stanford Research Institute (SRI) founded by the Tavistock Institute for Human Relations immediately following WWII. SRI’s initial purpose involved public relations campaigning and administration on behalf of British royalty. Specifically, Queen Elizabeth II

wished to develop the Royal Family's Alaskan oil fields with the help of Club of Rome member and international diplomat Robert O. Anderson. Through the Committee of 300, SRI emerged to help administer Queen Elizabeth II's ARCO Oil Company and Alaskan oil operations.(Coleman, 1992)

As discussed in Dr. Horowitz's previous books, ARCO constructed the HAARP atmospheric frequency generator in Alaska believed to be partly responsible for weather control, global warming, and potentially even psychotronic warfare. The project's European counterpart, EISCAT, whose website text was copyrighted by Cold Spring Harbor (CSH) Labs in New York, tied these projects to Rockefeller University and the "Human Genome Project."(Manning and Begich, 1995; Horowitz and Puleo, 1999)

The only reasonable explanation for CSH's engagement with the U.S. Federal Government's admitted atmospheric frequency generator (claimed to be a "heater") reflects the potential genetic effects of energies coming from space and HAARP's specific frequencies. This justifies concern following previous discussions pertaining to bioenergetics whereby subtle energies could be used to conduct "non-lethal warfare" operations even involving genetic manipulations from space.

Bringing our Kaiser concerns back to Earth, the infamous legacy of lending the Kaiser name to eugenics appears to be continuing in modern medicine. In fact, Dr. Horowitz has coined the term "iatrogenocide" to best describe the following matter of medical fact.

In June 1990, the CDC, with the help of Kaiser Permanente, injected more than 1500 six-month- old Black and Hispanic babies in Los Angeles with a "high-potency Edmonston Zagreb (EZ) measles vaccine." Tens of thousands of other infants were similarly treated experimentally in several Third World countries. The shots caused many deaths, but generally resulted in profound

chronic immune suppression and greatly enhanced susceptibility to infectious diseases and cancers.

The study was halted in October 1991, after more than a year of repeated reports from vaccine trial sites in Africa that female babies were dying in higher than expected numbers six months or longer after their inoculations.

CDC director David Satcher admitted in a June 17, 1996, *Los Angeles Times* article that an NIH investigation of the 1990–1991 Los Angeles study found that informed consent regulations had been violated because parents were not told their babies would be injected with an experimental vaccine that had never been licensed by the FDA.

“Sorry, sometimes these things just fall through the cracks,” another CDC official apologized.

The public learned that Kaiser Permanente’s health maintenance organization (HMO) in Northern California had become America’s premier vaccine testing institution, according to the San Jose *Mercury News*. (Eunjung, 1999) “But Black, Latino, and American Indian babies bear the brunt of the risk involved in getting vaccines to the market,” reported staff writer Ariana Eunjung.

“At least eight out of 14 childhood vaccines approved since 1990 were tested disproportionately in lower-income minority communities” largely through Kaiser’s trials in which “the experimental nature of the products and potential dangers weren’t properly described to parents.”

Consequently, bioethicists criticized the CDC and Kaiser Permanente’s “informed consent” policies. “The difficulty we’ve gotten into is that unfortunately many of those populations are . . . peripheral, poor and ethnic minorities,” stated Douglas Diekema, an associated professor of pediatrics and medical history at the University of Washington–Seattle. In the worst case, he added, if these vaccine trials caused major side effects, then “you have just taken advantage of a population.”

Officials representing the pharmaceutical industry countered the nationwide critique. "Our trials are mutually beneficial," defended Merck & Company's spokeswoman, Isabelle Claxton. She argued that the obvious ethnic and racial imbalance in vaccine testing was "meaningless." It was "only a problem," she said, "if they were victims . . . if there were some conspiracy to use them as guinea pigs. . . . But there is not."

In contrast to the covert operations of American medicine and public health detailed in this chapter, Eunjung simply wrote, "The socioeconomic and ethnic imbalance in vaccine studies is the by-product of a testing network that grew out of years of cooperation between the government, pharmaceutical companies and health care providers. . . . The first tests of new vaccines are usually conducted through academic centers and are funded at least partially by the NIH. The larger vaccine trials that come next can involve tens of thousands of children and take place mostly on Indian reservations or through HMOs like Kaiser Permanente in California, Colorado, Hawaii and Georgia or Group Health Cooperative in Washington."

"Kaiser Permanente Northern California, with 16 hospitals from Santa Rosa to Fresno, is the most popular vaccine-testing site in the nation . . . because of its military-like record keeping, and the fact that some 27,000 babies are born there every year," the *Mercury News* article continued. "Since 1990, the HMO has overseen 34 vaccine tests, for products developed by almost every major vaccine maker in the world." (Eunjung, 1999)

"Hasidic Jews in New York injected with the first hepatitis A vaccine joined the short list of ethnically disparate test subjects that further included Navajo and White Mountain Apache Indians, and Alaskan Eskimos, besides Los Angeles's urban mix.

"Internationally, the high-potency EZ measles experiment began at four major sites in the mid-1980s including Haiti, Senegal, Guinea Bissau and Mexico. Subsequent trials were conducted in Cameroon, Gambia, Bangladesh, Tono, Iran, New Guinea, Peru,

Figure 9.8. American Type Culture Collection "Curatorial" Development & Distribution of Tu- mor Viruses Including "Leukemogenic" Retro-

CONTRACT REPORTS - OFFICE OF PROGRAM RESOURCES & LOGISTICS

Dr. Jack Gruber, Chief, OPR&L, VOP, DCCP
Dr. Garrett V. Keefer, Staff Scientist, OPR&L, VOP, DCCP
Dr. John S. Cole III, Staff Scientist, OPR&L, VOP, DCCP

AMERICAN TYPE CULTURE COLLECTION (N01-CP-6-1047)

Title: Curatorial Preservation and Development of Reference-Grade Tumor Viruses

Contractor's Project Directors: Dr. Charles D. Aldrich

Project Officers (NCI): Dr. John S. Cole III
Dr. Garrett V. Keefer

Objectives: To biologically characterize and historically trace the origin of selected groups of tumor viruses, including avian, murine, feline, and primate, in order to develop and obtain reference-grade tumor virus materials. To serve as an archival repository for seed stocks of important virus materials from the Viral Oncology Program. To provide documented histories and characterizations of materials which have been provided in quantity to NCI collaborating investigators.

Major Findings: Receipt and characterization of oncogenic viruses from Program Resources and Logistics has continued. Data on RNA directed DNA polymerase of five murine and two primate viruses has been developed. Serological analysis of gs1 and gs3 antigen suggest a strong cross reactivity between squirrel monkey retrovirus and Mason-Pfizer Monkey Virus. The contractor reports a lack of correlation between *in vitro* assays of ecotropic viruses and leukemogenic activity *in vivo*, and an apparent transformation of euploid feline cells by Mouse Mammary Tumor Virus.

Significance to Biomedical Research and the Program of the Institute: Virus materials are supplied to investigators throughout the world by Program Resources and Logistics. It is important that highly characterized reference stocks of these viruses be available.

Proposed Course: This contract will continue for the duration of the approved project plan.

Date Contract Initiated: June 15, 1976

NIH document shows that the ATCC, linked to the Rockefeller-directed military/medical industrial complex and cancer industry through Rockefeller University President, Dr. Joshua Lederberg, committed acts that might be considered treasonous by supplying biological weapons, including leukemia-inducing and AIDS-like retroviruses to potential enemies, including Russian labs, during the Cold War. Dr. Lederberg's organization, the Senate Riegle Report on the Gulf War syndrome stated, had also shipped Saddam Hussein's biological weapons labs a broad array of viruses and deadly bacteria shortly before Iraq invaded Kuwait. Dr. Lederberg, a CFR study group director for "Non-lethal Warfare" and Biological Weapons planning, falsely denied, on behalf of the Pentagon, any biological weapons exposures to troops during the first Gulf War. From: NCI Staff. *The [Special] Virus Cancer Program [SVCP]*. U.S. Department of Health, Education and Welfare. Washington, D.C.: Public Health Service, National Institutes of Health, Division of Cancer Cause and Prevention, June 1978, p. 230. Library call number: E20.3152:V81/977 and 78-21195.

Figure 9.9. US-USSR Agreement Under Which Biological Weapons Including The Most Advanced Cancer Viruses Were Traded During the

US-USSR Agreement. A Memorandum of Understanding for cooperation in the study of the microbiology, immunology, and molecular biology of cancer viruses was first signed on November 18, 1972. The Memorandum established procedures for joint studies through the exchange of information, materials and scientists between the two countries.

Delegation Meetings:	November, 1972	Moscow, USSR
	November, 1973	Bethesda, USA (Subcommittee)
	May, 1974	Moscow, USSR
	May, 1975	Bethesda, USA
	June, 1976	Sukhumi, USSR
	October, 1977	Bethesda, USA
	September, 1978	Riga, Latvian SSR

As agreed, the fifth meeting of the US-USSR Joint Working Group on Cancer Virology, Co-Chairmen Dr. J.B. Moloney and Professor V.M. Zhdanov, took place at the National Institutes of Health, Bethesda, Maryland, USA, on October 26-28, 1977. At a symposium held on October 27 and 28, members of both delegations and invited speakers presented recent studies in cancer virology. The main emphasis of this meeting was given to reviewing the progress of current cooperative efforts and assessing the problem of recombinant DNA research. Dr. Michael Crawford (University of Kansas) presented preliminary results of a study to determine the role of genetic factors in an outbreak of leukemia in baboons. This work, conducted jointly by laboratories in the USA and in the USSR, is an excellent example of the cooperative research efforts sponsored under the US-USSR Agreement.

The Chairmen of both Sides reported on the recommendations made in the Memorandum of Understanding of the Joint Committee on Malignant Neoplasia held in Moscow, USSR, September, 1977. The recommendations included: (1) discussing, in depth, cooperative studies on recombinant DNA research, (2) increasing the program participation of other USSR institutions, in particular to include the Institute of Molecular Biology, Moscow, (3) conducting exchanges of scientists only under the auspices of the Cancer Virology Program under the topic of Malignant Neoplasia, USA-USSR Health Agreement, and (4) encouraging the use of small working group meetings on subjects of intense interest.

Delegates expressed interest in conducting collaborative studies in the following areas: (1) studies of viruses isolated from human tissues in cell culture or in animals and their possible role in the pathogenesis of human neoplasia; (2) continuation of studies on non-human primate viruses as they relate to human cancer; (3) studies on the role of viruses in the induction of human breast tumors, including continuation of studies on MPMV and related viruses; (4) studies on cocarcinogenesis--viral/viral, viral/chemical, and viral/hormonal; (5) characterization of nucleic acids and their role in the induction of animal and human cancers, particularly the detection of transforming sequences in cellular nucleic acids and molecular genetic studies with DNA from human tumor cells; (6) studies on viral proteins as probes for viral gene expression in animals and humans; and (7) studies on oncogenic viruses important to human ecology, e.g., those derived from bovine, avian,

Figure 9.9. US-USSR Agreement Continued

TO U.S. (continued)		INSTITUTIONS VISITED
Dr. I. Kryukova Gamaleya Inst., Moscow	February, 1976	M.D. Anderson Hosp. (Dr. Bowen); Michigan Cancer Fdn (Dr. Rich); NCI scientists; Rockefeller Inst. (Dr. Hanafusa)
Prof. S.M. Klimenko Ivanovsky Inst., Moscow	September, 1976	NCI scientists; Inst. Cancer Research (Dr. Blumberg)
Dr. E. Bagley Kiev Inst. Experimental and Clinical Oncology	March, 1977	NCI scientists; F. Hutchinson Cancer Ctr (Dr. Hakomori); Sloan-Kettering Institute (Dr. Sonnenberg)
Dr. Z. Butenko Kiev Inst. Experimental and Clinical Oncology	March, 1977	NCI scientists; laboratories of Drs. Spiegelman, Mayyasi, W. Moloney, E. Cronkite
Dr. S.A. Novakhatskiy Ivanovsky Inst., Moscow	May, 1977	<u>NCI scientists; laboratory of Dr. R. Gallo, NCI; area laboratories involved in large-scale production of human virus</u>
Dr. Felix Filatov Ivanovsky Inst., Moscow	September, 1977	University of Chicago (Dr. B. Roizman)
Dr. L.B. Stepanova Dr. O.B. Korchak Moscow Research Institute of Viral Preparations	November, 1977	NCI Laboratory of Viral Carcinogenesis, Viral Oncology Program
Prof. I.F. Seitz Petrov Institute of Oncology, Leningrad	April, 1978	<u>NCI (Dr. Gallo); USC (Drs. McAllister and Vogt); UCLA (Baluda); Sloan- Kettering (Dr. Bendich)</u>
Dr. Boris Lapin Director, Inst. for Experimental Pathology and Therapy, Sukhuml	September, 1978	NCI scientists; Sloan- Kettering Inst. (Dr. Moore- Jankowsky); Delta Regional Primate Ctr (Dr. Gerone)
Dr. Felix P. Filatov, Senior Scientific Researcher, Ivanovsky Institute of Virology, Moscow, spent three-and-one-half months in the laboratory of Dr. Bernard Roizman, University of Chicago. The purpose of his exchange visit was to gain experience in (a) preparative purification of Herpes		

The above agreement includes a partial list of researchers, including Dr. Robert Gallo of the NCI and AIDS virus fame, who traded the most advanced methods and materials in the fields of molecular biology, bacteriology, and cancer virology during the Cold War. Included was the "large-scale production of human virus" transferred to the Soviets by Dr. Gallo. Might this have been the AIDS virus? Additionally, besides possible treason for trading biological weapons technical knowledge, and the weapons of mass destruction themselves, with the Russians, these documents clearly reflect the functioning of a global cryptocracy that superceded the geopolitical policies of the United States Government, and knowledge of the American people. From: NCI Staff. *Op. cit.*, 1978, pp. 36 and 39. Library call number: E20.3152:V81/977 and 78-21195.

Rwanda, Sudan, South Africa, Egypt, Philippines, Uzbekistan, Thailand, and Zaire. Primary funding came from USAID and the WHO. In Haiti, infants were given the experimental vaccine at 10 to 500 times the usual dose levels.

“Kaiser attorney, Stan Watson, defended his organization’s Institutional Review Board (IRB) saying that the committee worked hard to fulfill every federal requirement, but regarding the public’s “recrimination” over how the Kaiser/CDC EZ measles vaccine experiments went, he argued, “People forget what disease was like. I saw polio. I saw people in iron lungs. The whole idea of what we do is a service to the community. We do it because it will benefit our patients and the world at large.”(Eunjung, 1999)

More than humanitarian fervor, Kaiser’s direction in this community “service” field, and efforts to “benefit . . . the world at large,” derived more from the Rockefeller–Rothschild–Royal Family -directed oligarchy than from the NIH, CDC, or WHO. Moreover, their contributions to the field of public health, according to Dr. Horowitz’s earlier exposé in *Death in the Air: Globalism, Terrorism and Toxic Warfare* (2001), sources mostly from major investments in “biospiritual (i.e., biological and electromagnetic) warfare for technotronic eugenics.”

As leading American medical sociologist Stephen Kunitz diplomatically concluded in the *Journal of the American Public health Association* in October, 2000, wherever the multinational corporations go, as directed by the “well-to-do WASPS,” so goes genocide affecting native populations.(Kunitz, 2000)

More Suppressed Facts and Therapeutic Alternatives

For the past half century, the Rockefeller–Farben directed Sloan and Kettering Foundations have not only led the cancer industry in the development and promotion of highly ineffective and risky chemotherapeutics, but they have, since the 1970s, consistently acted as a primary source of propaganda, in the truest

sense of psychological warfare, insofar as covering the genocidal aspects of the cancer industry. The lead propagandist has been Laurance Rockefeller, not only the long term director and financial chief of the Sloan–Kettering Memorial Cancer Center, and the top contributor to the Sloan Foundation, but also the director of *Reader's Digest* “with 18 million circulation and *National Geographic* with 10 million circulation,” according to author Eustace Mullins. This meant that the Rockefeller Brothers Fund director personally influenced at least 28 million middle class American households per month. Further evidencing this fact, Mullins cited Dr. Ralph Moss, former public relations director of the Sloan–Kettering cancer center, as having acknowledged *Reader's Digest* as the reputable “barometer of orthodox thinking on the cancer problem.”(Mullins, 1995)

Similarly, the Sloan Foundation has heavily financed “public management” communications research, and supported pioneering developments in this field. The organization granted funds to famous propagandists including CIA-affiliated author Richard Preston (*The Hot Zone*) and *The Coming Plagues* writer Laurie Garrett to publish their deceptive efforts. Promoting such famous authors and bestselling publications, the cartel has thus managed to cloud the public’s view of the industrial and iatrogenic origins of most cancers, other immune system disorders, and a plethora of laboratory produced viruses now killing millions. As detailed earlier by Horowitz (2001), this propagandist function is a central objective of non-lethal warfare.(Keith, 1997)

Vital truths about many modern infectious diseases, including AIDS and Ebola, cancers, and most chronic illnesses, as well as low cost, no risk, highly effective treatment alternatives, have been effectively concealed by global industrialists through their use of such propaganda.

Robert Guccione, the publisher of *Penthouse Magazine*, brought an excellent example of this offensive masquerade to light.(Kamen, 1997) Motivated by the medical mismanagement

Fig. 9.10. *Harper's* Magazine Promotion, February 2001— “The Case Against Henry Kissinger: The Making of a War Criminal.”

HARPER'S

MAGAZINE February 2001

The cover of *Harper's* magazine heralds the genocidal activity of Nelson Rockefeller's protégé—falsely respected foreign policy diplomat Dr. Henry Kissinger. Curiously, and serendipitously, adjacent Kissinger's familiar forlorn face is a “weekly review” on the technology he politically and militarily helped to develop—the eugenic biological weapons race. The *Harper's* article covered Dr. Kissinger's Vietnam War and South American shenanigans, and said nothing about this even more heinous offenses. In 1969, according to related Congressional testimonies by CIA directors Richard Helms and William Colby, Kissinger selected the military option to develop immune system ravaging “synthetic biological agents” like Ebola for germ warfare. He was also very interested in AIDS-like viruses for population control, particularly for Africa. Nixon's “War on Cancer” was largely inspired by Kissinger, on behalf of Rockefeller interests, as a cover for the scientific race to develop more potent genocidal pathogens.

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THIS MONTH IN HARPER'S MAGAZINE

THE CASE AGAINST HENRY KISSINGER

Part I: The making of a war criminal
by Christopher Hitchens

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WEEKLY REVIEW

January 30, 2001: Australian researchers, who were trying to use genetic engineering to sterilize mice, accidentally created a deadly, immune-system-destroying strain of the mousepox virus, a cousin of the human smallpox virus. Two biotechnology companies announced that they had sequenced the rice genome. Uganda's most recent outbreak of Ebola fever seemed to be over. Someone sent a letter filled with orange

of his wife, Kathy Keeton, for breast cancer, and her premature death from a “low risk” hospital procedure, Guccione initiated a class action lawsuit against the NCI that was announced in a feature story in his September 1997 issue. In “The \$200 Billion Scam: Uncle Sam’s Continuing Medical Genocide,” author Jeff Kamen relayed the Guccione’s story in which Kathy had been persuaded to forego promising alternative treatment with hydrazine sulfate for standard chemotherapy. The “inexpensive and effective cancer-fighting drug,” hydrazine sulfate, proven lifesaving in numerous studies in foreign countries, had been investigated and highly recommended by Joseph Gold, M.D., a former U.S. Air Force research physician, who later became Director of the Syracuse Cancer Research Institute in upstate New York.

The NCI-sponsored U.S. Government cover-up of hydrazine sulfate’s utility began, according to a congressional investigation, in 1976 when NCI officials wrote to Congressman James M. Hanley of New York, “Hydrazine sulfate has been tested in the Soviet Union at the Petrov Institute. . . . No evidence of meaningful anticancer activity was reported.” The following week, Congressman Hanley, who had launched the official inquiry, received the actual Petrov-study report that relayed just the opposite: “We observed a definite therapeutic effect of hydrazine sulfate in patients with Hodgkin’s disease and malignant tumors of various localizations in far-advanced stages, when other measures of specific therapy have failed.” Since then, Jeff Kamen reported, hydrazine sulfate became “an approved, first-line cancer drug in Russia, after 17 years of successful clinical testing there.”(Kamen, 1997)

Kamen reported that a large-scale clinical cancer trial of hydrazine sulfate was deliberately sabotaged by NCI investigators, who literally killed hundreds of women by neglecting to inform them about the known risks of combining the experimental drug with tranquilizers. Kamen wrote:

In these [1989 and 1993] clinical trials the NCI failed to inform patients in its “informed-consent statements” that the combination of hydrazine sulfate with tranquilizers, barbiturates, and alcohol—in one of the NCI studies 94 percent of all patients were given tranquilizers alone—could not only deactivate the therapeutic action of the drug but could result in patient morbidity and mortality. The reason these severely ill cancer patients permitted the government to experiment on them with hydrazine sulfate was their hope that this drug might help them in the way it had helped the dozens of patients in smaller clinical trials conducted by Harbor-UCLA during ten years of testing.(Kamen, 1997)

Later, in an effort to conceal the NCI’s liability, a bogus United States General Accounting Office (GAO) investigation was published that stated the NCI’s trials “were not flawed.”

Undeterred by the obvious suppression of data and devious conclusion by the GAO, Mr. Guccione rallied his forces on Capitol Hill to further investigate the issue along with the GAO. On October 20, 1997, a Senate Subcommittee concluded that the NCI and the GAO had indeed erred. The Chief Minority Counsel, who spoke for the hearings committee, reported that the government agencies’ conclusions about hydrazine sulfate were “plainly absurd” and “extremely misleading.”(Kamen, 1997)

Rockefeller Power Over the U.S. Government

By what mechanism(s) might Rockefeller family members have exerted such control over the U.S. Government and health science agencies? The answer is, through a hierarchy of privately financed and controlled corporate and institutional entities.

For instance, following WWII, Nelson Rockefeller remained highly active in the politically powerful Council on Foreign Relations (CFR) directed by the Executive Arm of the Royal Institute for International Affairs under the Committee of 300. The CFR, an organization that many authors have effectively exposed, deserves additional mention and updating here regarding its influence in establishing international policies for administering its various forms of population control.

According to the CFR's website, the largely Rockefeller-directed organization promoted its global, allegedly "peacekeeping," services thusly:

Businessmen, bankers, and lawyers determined to keep the United States engaged in the world founded the Council on Foreign Relations in 1921. Today, the Council is composed of men and women from all walks of international life and from all parts of America, dedicated to the belief that the nation's peace and prosperity are firmly linked to that of the rest of the world. From this flows the Council's mission: to foster America's understanding of other nations—their peoples, cultures, histories, hopes, quarrels, and ambitions—and thus to serve our nation through study and debate, private and public.

The Council is a national membership organization and think tank with headquarters in New York, offices in Washington, D.C., and programs nationwide. Its widely respected and influential research staff—with backgrounds in government and scholarship in most international subjects—regularly meets with Council members and other leaders and thinkers. These exclusive sessions, known as study groups or roundtables, form the Council's intellectual core. The aim is to provide insights into international affairs and to develop new ideas for U.S. foreign policy, *particularly national security and foreign economic policy*. Council Fellows produce books, articles, and op-ed pieces and regularly contribute expert commentary on television and radio. [Emphasis added.]

The Council also publishes *Foreign Affairs*, the leading periodical in the field. This magazine has been host to the most important articles about world affairs in this century. [e.g., this was wherein Henry Kissinger published his nuclear weapon's thesis that ultimately directed the deployment of nuclear warheads throughout Europe largely on behalf of Nelson Rockefeller, who appointed Kissinger to lead the first CFR nuclear weapons study group in 1955.(Kissinger, 1956; Isaacson, 1992; Horowitz and Martin, 1998)]

The Council's 3,600 members [Note the Pythagorean numerological sum of 3+6=9 or "completion."] are divided almost equally among New York, Washington, D.C., and the rest of the nation. They include nearly all current and former senior U.S. government officials who deal with international matters; renowned scholars; and leaders of business, media, human rights, humanitarian, and other nongovernmental groups. Council members choose new members, who aim to educate themselves and then others.(CFR Website, 2001)

In this way, the ideological cult consensus of CFR core members is evangelized throughout the growing organization and nation. Their power ultimately moves media, politics, and policies, both U.S. domestic and foreign.

The next paragraphs provide a shallow disclaimer regarding the organization's stealth-like influence.

The Council is host to the widest possible range of views and advocate of none. It cultivates an atmosphere of nonpartisanship and nonideological engagement among members and staff. The views expressed in Council-sponsored independent task force reports, by members of study groups, or in articles in *Foreign Affairs* are solely the responsibility of the respective authors or groups.

This tradition of impartiality enables the Council to gather contending voices for serious and civil debate and discussion. That special convening power is unique in American society.(CFR Website, 2001)

"In keeping with its mission . . . and heritage," Council members consistently pursued three major goals, the website promoted. These included the provision of "new ideas for U.S. foreign policy," such as nuclear weapons deployment as directed by Rockefeller subordinate Dr. Henry Kissinger, and preparations for global bioterrorism as directed by unrecognized white collar bioterrorists including Dr. Joshua Lederberg, past president of Rockefeller University, and previous curator of the American Type Culture Collection (ATCC). (See figure 9.8)

Treasonous Foreign Policies

The CFR's 1997 Bioterrorism Study Group Director, Dr. Lederberg, was discredited in Dr. Horowitz's previous publications for lying to Congressional investigators and the American people on behalf of the Pentagon regarding biological exposures of Gulf War troops. Saddam Hussein's preparedness to conduct biochemical warfare was largely due to the ATCC shipments of biological weapons cultures, including the West Nile Virus (WNV), anthrax, and botulism to Iraq prior to the Gulf War. Dr. Lederberg

knew this, yet denied the obvious indications of infectious disease symptoms among allied troops, except for the French. Their military wisely avoided allied “defensive” vaccinations that were widely contaminated with mycoplasma.(Horowitz, 1999)

The NIH documents reprinted in figure 9.9 are equally shocking. The contract shows that the ATCC committed acts that, at minimum, border on treason against the United States. These records show that *biological weapons of mass destruction, including leukemia-inducing and HIV-like retroviruses, were shipped to Russian biological warfare labs during the Cold War*. The Senate Riegle Committee investigation of the ATCC failed to articulate this fact. Thus, not only had Saddam Hussein received biological weapons shipments from the ATCC, but also, so had the Russians prior to glasnost. This document evidenced the functioning of a global cryptocracy that superceded the geopolitical policies of the U.S. Government and knowledge of the American people.

Dr. Lederberg had facilitated the biological weapons study group meeting at the CFR in 1997 with Richard K. Betts, Senior Fellow and Director of National Security Studies. Thus, the CFR, Betts, and other high level national security officials are implicated by association, with Lederberg, to these reasonably treasonous acts against the United States, aside from the genocidal questions raised by these documents.

In light of the USDHEW/NIH document reprinted in figure 9.9, citing the Russian recipients of America’s most advanced viral cancer triggers, and other assorted biological weapons, the frequent allegation of American biowarfare “experts” that Russia was outpacing the U.S. in the biological weapons race can now be seen as grossly deceptive. According to a “Special Virus Cancer Program (SVCP)” report of 1978, the Russians required and readily received, complete scientific assistance in developing their cancer virus and infectious disease laboratories and arsenals. Page two of the figure shows that in April, 1978, six years

before Dr. Gallo was alleged to have discovered the AIDS virus, and just as the first GRID/AIDS cases were being diagnosed in New York, Dr. Gallo was delivering “large-scale production of [very similar leukemogenic] human [retro-] virus[es]” to the Russians at the Ivanovsky Institute in Moscow. This was among the premier Communist military biological weapons institutes.(US Dept of Health, 1978)

The CFR’s “Private” Policy Initiatives

In contrast to the above disclosures, here’s how the CFR articulated first “humanitarian” goals. Emphasis has been added:

[To] add value by improving understanding of world affairs and by providing new ideas for U.S. foreign policy. The Council does this in many ways.

The Council will sponsor an independent task force when an issue arises of current and critical importance to U.S. foreign policy, and it seems that a group diverse in backgrounds and perspectives may nonetheless be able to reach a meaningful policy consensus through *private* and nonpartisan deliberations.

Council Policy Initiatives (CPIs) focus on current foreign policy issues of great importance where consensus seems unlikely. . . .(CFR Website, 2001)

It certainly would be next to impossible to develop a “consensus” regarding, for instance, the deployment of weapons of mass destruction. That is precisely why “nonpartisan deliberations” on such matters as nuclear and biological weapons are conducted in “*private*.”

The CFR’s second goal targeted organizational development. The membership was pledged to:

Transform the Council into a truly national organization to benefit from the expertise and experience of leaders nationwide. The Council aims to energize foreign policy discussions across the country. And as Council membership outside New York and Washington, D.C. continues to grow and diversify, the Council creates new ways to involve these members in intellectual dialogue. The four principal means of involvement are through a special members’ area of the Council’s website,

at an annual National Conference, at dinner seminars based on Study Groups and independent task forces in key cities around the country, and through an interactive video-conferencing system.(CFR Website, 2001)

Finally, to assure its survival and future influence, the CFR pledged to:

Find and nurture the next generation of foreign policy leaders and thinkers. The Council does this primarily through a special term membership program for younger Americans and a “Next Generation Fellows” program that brings outstanding younger scholars onto the Council staff, as well as the International Affairs Fellowships and several other fellowship programs. These programs aim to spark interest and participation in world affairs and U.S. foreign policy.

In recent months, Council members have heard Madeleine K. Albright, Kofi Anan, James A. Baker III, Warren Christopher, Henry A. Kissinger, and George P. Shultz offer their views of challenges the United States will face in the next century; Charlene Barshefsky, Anatoly Chubais, Bill Clinton, Stanley Fischer, Paul Krugman, Lee Kuan Yew, George Soros, and James D. Wolfensohn discuss the global economy; William S. Cohen and the Joint Chiefs of Staff evaluate future defense policy . . . As much as at any time during its nearly eight decades, the Council on Foreign Relations today serves its members and the nation with ideas for a better and safer world.(CFR Website, 2001)

Thus, council members may believe that we live in a “better and safer world” as a result of developing genetically mutated biological weapons of mass destruction which the organization and its leaders, especially Rockefeller family members and their associates, “privately” manage from within this group.

Indeed, most people cannot conceive of a conspiracy of such magnitude that might allow this elite, virtually secret, society operating beneath a thin veil of propaganda to dictate U.S. Government policies to the extent the CFR, with the Rockefeller family at its helm, continues to do.

Rockefeller Befriends Kissinger

For the benefit of serious disbelievers, the following history documents the involvement of Dr. Henry Kissinger at the CFR

on behalf of Nelson Rockefeller and their allies. The following facts might provide a suitable reality check, and explain why Dr. Kissinger's identity, Horowitz (2001) explained previously, deserves the designation "666"—"mark of the beast." The following should also be received as an adjunct to the article written by Christopher Hitchens in *Harpers*, March 2001, which explained why Rockefeller's protégé should be tried in an international court of law as a treasonous war criminal. (See figure 9.10)

In 1955, President Eisenhower's assistant for international affairs, Nelson Rockefeller, invited Dr. Kissinger to discuss national security issues at the Quantico (Virginia) Marine Base. Following their meeting, according to *Newsweek's* Managing Editor, Walter Isaacson, Kissinger "the diplomat" became Rockefeller's "closest intellectual associate." Soon after, Kissinger authored several military proposals for Eisenhower to consider which, like his forthcoming nuclear weapons strategy, best served Rockefeller financial interests. Unimpressed, Eisenhower turned them down. (Kissinger, 1956; Isaacson, 1992)

As a result, Rockefeller sent Eisenhower his resignation and then launched a Special Studies Project that explored the "critical choices" America faced militarily in the coming years. Kissinger agreed to direct this new project along with a CFR study group, and as a result, published a 468-page book on his findings. The treatise proposed that tactical nuclear weapons be developed and "a bomb shelter [be built] in every house" in America in preparation for limited thermonuclear war. "The willingness to engage in nuclear war when necessary is part of the price of our freedom," Kissinger argued. (Isaacson, 1992)

Those old enough may recall the school "nuclear bomb drills," with fire alarms sounding as classes proceeded to the closest "fallout shelter"—typically the basement or beneath one's desk. The source of the intense anxiety felt by almost everyone might be best assigned to this Rockefeller/Kissinger CFR plan. This was a practical expression of the dim view regarding prospects for world peace that Kissinger, on behalf of Rockefeller,

articulated from at least the time he completed his Harvard doctoral thesis, *The Meaning of History*, according to Isaacson's biography.(Isaacson, 1992)

Eisenhower had warned America, without mentioning names, that the gravest threat to world security, democracy, and even spirituality, was the growing military-industrial complex directed by the Rockefeller family in partnership with the European oligarchy and banking cartel. Kissinger became a leading proponent and propagandist for this unholy alliance and their globalistic intentions.

For more than ten years, Nelson Rockefeller's nuclear policy guru remained a well-paid Chase Bank consultant and Harvard faculty member. During that time, Kissinger continued writing numerous books and articles on subjects related to the practical application of his "realpolitik" in the nuclear and "Cold War" age. He also continued to provide favors and advice to White House dignitaries, and Rockefeller executives, until late 1968. After Nelson Rockefeller lost the Republican presidential nomination to Richard Nixon, Kissinger was appointed Nixon's chief of foreign policy and, as National Security Advisor, overseer of domestic and foreign intelligence by the FBI and CIA respectively.(Kissinger, 1956; Isaacson, 1992)

The National security Council Job

During his 1968 Presidential campaign, Nixon became enamored with Kissinger's knowledge and loyalty. Kissinger had kept Nixon abreast of Vietnam War scuttlebutt within the Johnson camp for his campaign speeches and meetings with the press. In appreciation and respect for his powerful affiliations in the Rockefeller camp, Nixon rewarded him with the top position in national security.(Isaacson, 1992)

Nixon's aim in appointing Kissinger to be in charge of the National Security Council was to "run foreign policy from the White House."

Besides Kissinger, another candidate for the national security post, was Nixon intimate Roy Ash, the president of Litton Industries. According to G. Edward Griffin, Rockefeller influence was heavily felt in directing Litton Industries.(Griffin, 1997) The realization that Roy Ash, Litton Industries, and Litton Bionetics, was part of a Rockefeller-led “good ole boy” network that included Henry Kissinger initially shocked Dr. Horowitz because of its implications concerning population control and the origin and initial transmission of HIV/AIDS.

According to testimonies by two previous CIA directors—Richard Helms and William Colby—it was Kissinger who must be credited for selecting the option to develop the exquisitely unique immune suppressive viruses described in figures 9.1, 9.8 and 9.9 that Litton Bionetics executives, including Robert Ting, John Landon, and NCI affiliate “Project Officer” Dr. Robert Gallo had developed and later delivered to the Russians.(Horowitz, 1998) These viruses, Gallo later published, were closely related to HIV.

In other words, between 1976 and 1978, the first cases of AIDS appeared simultaneously and mysteriously in New York City and Central Africa; precisely where NCI and Merck hepatitis B vaccines, produced with Litton Bionetics-supplied chimpanzees’ serum, were tested in gay men and Black women on these far removed continents. These unique viruses were being massively cultivated in Litton’s labs in the U.S. and Africa at that precise time. Their DNA was more than 60% identical to chimpanzee immunodeficiency viruses. They induced the never-before-seen leukemia–lymphoma–sarcoma cancer complex along with immune suppression and opportunistic infections. Again, as per figure 9.1, this feasibility was precisely foretold by NAS-NRC scientists as a means for developing “synthetic biological agents” for germ warfare and “massive killing of large populations.”(DoD, 1969) The KissingerRockefeller-directed cryptocracy had sought and selected this option.(Horowitz,

1998) The Rockefeller-linked International Agency for Research on Cancer (IARC) administered the “cancer research” vaccinations in Africa. (All of this highly incriminating information is discussed, documented, and scientifically referenced at www.originofAIDS.com.) The NIH, another virtual Rockefeller proprietary, funded this “Special [i.e., Secret] Virus Cancer Program” beginning on February 12, 1962, after Merck Pharmaceutical Company vaccine officials realized they had just spread another primate cancer virus, SV40, globally in contaminated Salk and Sabin polio vaccines.(Horowitz, 1998)

Roy Ash had cofounded and directed Litton Industries, the mega military weapons contractor, from 1953 to 1972. In 1969, in lieu of having the National security Council position go to Kissinger, Nixon appointed Ash to be Chairman of the President’s Advisory Council on Executive Organizations, a post he held until 1971. Subsequently, Litton’s principal was elevated to the rank of “Assistant to the President of the United States.” He served the Nixon and Ford administrations in this capacity as well as directed the Office of Management and Budget for the White House until 1975. More recently, to the time of this writing, Ash has served as a leading fund raiser for the Republican Party.(Who’s Who, 1995)

Also, to the time of this writing, Ash’s White House contemporary, Henry Kissinger, has remained a leading advisor to Merck Pharmaceutical Company officials. Again, it was Merck’s hepatitis B vaccine, partly prepared in Litton supplied contaminated chimpanzees, that was heavily implicated as the AIDS pandemic trigger.(Horowitz, 1998)

Kissinger, nominated by President George Bush to direct the controversial 9/11 investigation, withdrew from the opportunity fearing disclosure of such conflicting interests and corporate affiliations.

The CIA and Biochemical Warfare

As detailed in Dr. Horowitz's previous works, the CIA, currently overseeing all health science agencies and institutions in the U.S. according to the *Washington Post*, operated without any interference from the Justice Department from at least mid-1970 to mid-1973. This was done allegedly for "national security" reasons. Following the suspected assassination of FBI Director J. Edgar Hoover in 1972, the CIA grew in strength as the nucleus of foreign and domestic espionage operations. Despite the embarrassment of getting caught playing a central role in the infamous Watergate break-ins, the CIA, investigated by a Rockefeller chaired hearings committee, was hardly chastised by Congress.(Rockefeller, 1975) Thereafter, it continued to expand agency operations at home and abroad under Kissinger with allegiance to Rockefeller.(Isaacson, 1992) These Nixon administration survivors, including Chief of Staff Alexander Haig, ran the CIA, State, and Defense departments. They reinstated COINTELPRO-like intelligence operations,(Schaap, 1982) expanded CIA covert operations in Africa,(Agee, 1979) and increased biological as well as chemical weapons research, development, and testing.(Lederer, 1987; Policy Cong. Sess. 1974)

In 1973, the CIA labored to maintain its positive public image. International condemnation over ongoing American biological warfare "experiments" was imminent. Anticipating this fallout, the Rockefeller Commission Investigation on CIA Wrongdoing began in the aftermath of Watergate. It was then that CIA director Richard Helms, succeeded shortly thereafter by William Colby, ordered Mr. Sidney Gottlieb, Chief of the CIA's Technical Services Division, and former head of its MKULTRA (mind control and population control) operation, to destroy all records pertaining to the "formulation, the development and the retention of" illegal biologicals that were used to wage wars and experiments on Third World populations. Helms's orders, he insinuated, came from his superior—Dr. Henry Kissinger.(US Senate, 1975; Isaacson, 1992)

By May 1973, in the wake of the Watergate scandal, as international attention focused on Nixon's fall from grace, a shadow government took control of America. The interim administration—which formed before President Ford was confirmed—was largely powered by Rockefeller, and commandeered by Kissinger and Alexander Haig.(Isaacson, 1992)

During the following presidential campaign, Zbigniew Brzezinski, Jimmy Carter's campaign manager and David Rockefeller's protégé, launched an embittered attack against the incumbent's foreign policy. Publishing in the CFR's *Foreign Affairs* he described Kissinger's tactics as:

Covert, manipulative, and deceptive in style, it seemed committed to a largely static view of the world, based on a traditional balance of power, seeking accommodation among the major powers on the basis of spheres of influence.(Isaacson, 1992)

Cold and accurate as this criticism was, the irrefutable fact was that Kissinger, and by association, the Rockefellers' globalist cohorts at the CFR *including* Brzezinski, continued advancing genocidal policies.

While campaigning for the presidency, Jimmy Carter assailed Kissinger for being the real "foreign policy . . . president of this country." "Under the Nixon–Ford administration," he said in a speech, "there has evolved a kind of secretive . . . closely guarded and amoral . . . , 'Lone Ranger' foreign policy, a one-man policy of international adventure." To these attacks, Carter added his standard refrain. "Our foreign policy should be as open and honest as the American people themselves."(Isaacson, 1992; Carter, 1976)

One year later, under the more "open and honest" policies established by Carter, Brzezinski became National Security Advisor, and Joseph Califano became Secretary of the U.S. Department of Health, Education and Welfare (DHEW). Their more advanced genocidal policies were described by Dr. Horowitz in Chapter 18 of *Death in the Air: Globalism, Terrorism and Toxic Warfare*. Both men heavily supported Ray Ravenhott, the director of pop-

ulation control programs for USAID, who revealed his agency's intention to help sterilize one quarter of the world's women. He argued that this need stemmed from the administration's desire to protect U.S. corporate interests from the threat of Third World revolutions spawned by chronic unemployment.(Lederer, 1987)

Today, with this sterilization goal having been achieved in the Third World, as well as in most other indigenous populations including native North Americans and urban dwelling Blacks, the political mischief, deceptions, and global genocide continues.

In this vein of politically and technologically advanced eugenics and U.S. Government facilitated genocide, in response to the same alleged "threat" of Third World revolutions and economic chaos, on April 30, 2000, the news media announced a National security Agency (NSA) move to place AIDS science, and all public health agencies conducting it, under military intelligence command. The NSA and CIA were directed to oversee organizations such as the CDC, NCI, FDA, and National Institutes for Allergies and Infectious Diseases (NIAID). Curiously, this occurred directly following South African President's Thabo Mbeki's decision to include the testimonies of "dissident" scientists in a review of HIV/AIDS's origin, pathogenesis, and treatment. The National Intelligence Council (NIC) then advised President Clinton to formally declare global AIDS a U.S. "national security threat."(Bolen, 2000; Gelman, 2000)

The CIA sponsored report warned, "The persistent infectious disease burden is likely to aggravate and, in some cases, may even provoke economic decay, social fragmentation, and political destabilization in the hardest hit countries. . . .

"The study defined 'instability,' as revolutionary wars, ethnic wars, genocides, and disruptive regime transitions. . . . Dramatic declines in life expectancy," the study said, is the strongest threat to national security simply because people revolt when they realize their lives are being genocidally threatened. Such "deterioration," intelligence analysts wrote, might be followed by only

“limited improvement . . . owing to better prevention and control efforts, new drugs, and vaccines.”(National Intelligence Council, 2000)

The report posted many statistics reflective of the fact that biochemical warfare is being conducted in the name of “public health” to covertly accomplish genocidal objectives. For instance, the CIA summarized its intelligence on the “Number of 15-year-olds per 10,000 of that age group” who had “lost their mothers or both parents to AIDS.” Uganda far surpassed other nations in this catastrophic parameter. Uganda, they did not report, was home to Litton Bionetics, the Rockefeller-linked IARC, and the principle site of chimpanzee-derived hepatitis B vaccine trials linked to the initial spread of HIV/AIDS. In 2001, additional vaccine trials to allegedly combat the spread of HIV/AIDS were conducted.(Gellman, 2000)

According to U.S. Government watchdog groups and related policy analysts linked to JuriMed—a North American alternative medicine advocacy and legislative lobbying group—President Clinton’s legislation empowered the CIA to act against scientific “dissidents” who raised concerns regarding the origin of AIDS and genocidal aspects of vaccination policies. As done in this book, such evidence might be considered a threat to U.S. National Security. The JuriMed communique heralded the likelihood of increased “mainstream [media] blackouts on AIDS dissident positions,” and, as mentioned above, “global disease control” initiatives including “wide-ranging vaccination programs” becoming more coercive.(Bolen, 2000) We consider this “business as usual” for the Rockefeller-directed military–medical–pharmaceutical cartel and propaganda mill.

The Human Eugenics Program: Future Prospects for Population control

One might ask, “What are the prospects for human health given the above disclosures?”

Earlier, the Atomic Energy Commission, the AEC, was shown playing a dual role in investigating radiological as well as biological threats and weapons of mass destruction. Their research contracts covered “co-carcinogenesis” studies linking viral research and genetic engineering to nuclear radiation studies and risks from the full spectrum of electromagnetic radiations including nonionizing frequencies that fall within the transmission capability of the CIA’s Phoenix II and Montauk projects. (Horowitz, 2001) HAARP, likewise, has been directly linked to the Rockefeller/Royal Family -directed Human Genome Project through Cold Spring Harbor Laboratory’s copyrighted material published in *Healing Codes for the Biological Apocalypse*. (Horowitz and Puleo, 1999) Thus, there seems to be a suspicious, if not highly disconcerting, connection between the most sophisticated genetic advancements and radiological (including frequency) research. What are the implications of this multidisciplinary subject, including its ramifications to population control in general?

Based on the evidence presented in this book, it can be safely assumed that AEC investigators, project HAARP scientists, and Human Genome Project principals, are coordinated at the highest levels by families historically invested in eugenics for economic and political stability. These parties, most kindly referred to as “leading globalists,” committed to efficient methods of optimal population control, are well aware that the primary function of DNA lies not in protein synthesis, but in the electromagnetic or energetic realm. Why also was the AEC and DoE commissioned to lead the Human Genome Project? Moreover, who directed their activities, and for what motive? The AEC had historically sought genetic discoveries for, among other things, their potential use and abuse in military medical manipulations. This bioenergetic domain represents the cutting edge of DNA science and warfare. For those in the national security field, who leave no stone unturned in efforts to develop advanced “defense” systems, “healthcare” technologies, and weapons of mass destruction that deliver “more bang for the buck,” this area of genetic science is critical.

In 1923, Russian anatomy professor, Dr. A. G. Gurvich, pointed the root tip of a growing onion toward the side of a second proliferating onion root. He noticed that the cells of the latter, in the area of the root tip, divided much faster. He theorized that ultraviolet light, or some other electromagnetic “mitogenetic radiation,” was likely responsible for the biological change later called the “Gurvich Effect”—the effect of mitogenetic radiation on cells.(Horowitz, 2001)

In *Death in the Air: Globalism, Terrorism and Toxic Warfare*, Dr. Horowitz (2001) advanced the notion of population control through “biospiritual warfare.” He reviewed the work of Dr. V.F. Kaznachayev and his associates that showed *ultraviolet light frequencies could transmit viral induced infections between isolated cell cultures*. These researchers arranged “pairs of sealed glass tubes containing healthy cell cultures end to end separated only by a sheet of quartz.” After inoculating one culture with a deadly virus, the investigators were surprised to learn the adjacent sterile culture also became infected.

When they duplicated the experiment with the quartz sheet removed, the sterile culture adjacent to the infected one remained unaffected. The glass tubes alone could not transmit the electromagnetic frequencies required to communicate the infectious disease and its frequency. In other words, *special disease frequencies were transmitted by the quartz crystal and these alone were sufficient to infect sterile cell cultures*.

After repeatedly reproducing these results, the Russian team surmised that when the infected cells in culture died, they emitted UV light which was transmitted through the quartz to the adjacent cell cultures. These electromagnetic frequency transmissions then induced progressive cell death in the initially healthy cultures.

Kaznachayev’s team also showed that with the introduction of a virus into cell cultures, a change in the photon emissions of the cells was seen even before cell degeneration and death occurred.

Dr. Schjelderup, a Norwegian doctor suggested that such viruses might emit lethal electromagnetic (EM) radiations, and thus kill cells in culture. He added that viral infections might thereby transmit disease by specific frequency emissions besides physical or genetic contact.

Based on the scientific knowledge advanced in previous chapters, no doubt these effects are electrogenetically directed.

As the cell cultures died in Kaznachayev's study, they were observed to change their UV frequency radiations. This suggested that disease processes could possibly be altered by determining the dying cell frequency emissions and intercepting or neutralizing them before they had a chance to kill adjacent cells or tissues within their energy field. Additional support for this theory came from the observation that yeast cell reproduction could be slowed using specific UV light frequencies.

Alternatively, these findings suggested military applications beyond most people's worse nightmares.

The preceding information explains the great interest shown by the (now international) AEC since at least the 1970s in this interdisciplinary field merging genetics, cancer, and disease virology with radiology. Based on these discussions, it is most reasonable to conclude much of the motivation behind the Human Genome Project is not for prevention. Authorities allege the identification of genes that specifically predispose groups of people to certain diseases will help humanity with modern vaccines and medicines. Rather, eugenics advanced through frequency technologies and bioelectrics is more likely to serve the oligarchy's biospiritual warfare objectives.

In the next chapter, these nefarious activities will become even more apparent during our examination of Human Genome Project directors, and their affiliations with untrustworthy, if not criminal, organizations and persons. These include the leading institutional and individual suspects in the still-to-be-officially-solved anthrax mailings mystery.

Chapter 10.

The Human Genome Project Heist

“Just how tainted has medicine become?
Heavily, and damagingly so.”

The Editors
Lancet, 2002

Serial killers are often caught by criminal investigators using DNA and crime scene analyses. This chapter investigates a serial killing of sorts, and analyzes related data to advance a more widespread crime and global conspiracy theory. We evidence here an organized crime in the field of genetic science of unprecedented magnitude. We first document a case of serial homicide implicating genetic and pharmaceutical industrialists engaged in bioengineering of anthrax as a weapon of mass destruction deployed for bioterrorism. We advance the criminals' motivation to create a mass-mediated public panic to promote obvious political and economic agendas. We evidence here that the infamous anthrax mailings were planned years in advance and committed by white-collar bioterrorists intending to commit serial homicide for publicity, profit, and political and legislative gains in the direction of further population control. Furthermore, these revelations concerning the anthrax mailings suspects brought us to realize a broader conspiracy in the field of genetics, and specifically a heist of the widely publicized Human Genome Project. The implications of this generally unrecognized crime and conspiracy against humanity are discussed in pages that follow.

This research was initially conducted by Dr. Horowitz, who had been investigating the Michigan-based anthrax vaccine maker, Bioport, LLC, for approximately three years prior to September, 2001 when the highly publicized mailings occurred.

One week *before* the first reported anthrax mailing, Dr. Horowitz faxed his local Federal Bureau of Investigation (FBI) officials in Coeur D'Alene, ID, an *urgent* request to begin an immediate investigation into the anthrax conspiracy detailed below. In fact, following a day with no official response to the doctor's prophetic warning, he did what many conscientious citizens might, he marched directly into their headquarters to request a hearing. Following this meeting with FBI associate bureau chief Kevin Dunton, no action was taken by the bureau. A week later, following the first reported anthrax mailing by the press, Dr. Horowitz again petitioned the agency several times by phone and e-mail. He continued submitting numerous letters to FBI officials over the ensuing months in efforts to redirect their unproductive investigation. Finally, after six months of fruitless efforts to gain the FBI's interest, two agents were assigned to visit the doctor. Surely, you can appreciate his surprised disappointment and frustration when, after all of his efforts, FBI officials in Washington determined to make him a "criminal suspect" rather than a scientific informant in their fruitless inquisition.

Dr. Horowitz had urged government investigators to consider the unfolding anthrax fright as the planned and desired response to postal industry sabotage and military-style propaganda. With his Harvard-trained expertise in behavioral science, especially media persuasion technologies research, and extensive military intelligence in the realm of biological warfare, Dr. Horowitz observed that America's news coverage of anthrax, and subsequently the anthrax mailings, held many similarities to what military intelligence officials in previous years called psychological operations (PSYOPs) for command and control warfare (C2W). An early objective in this unique anthrax campaign, Dr. Horowitz supposed, appeared to be massive sales of the falsely alleged "anthrax antibiotic" CIPRO. Subsequently, forced "emergency" legislation effecting nearly a half-billion dollars in anthrax and smallpox vaccine purchases by the federal government appeared

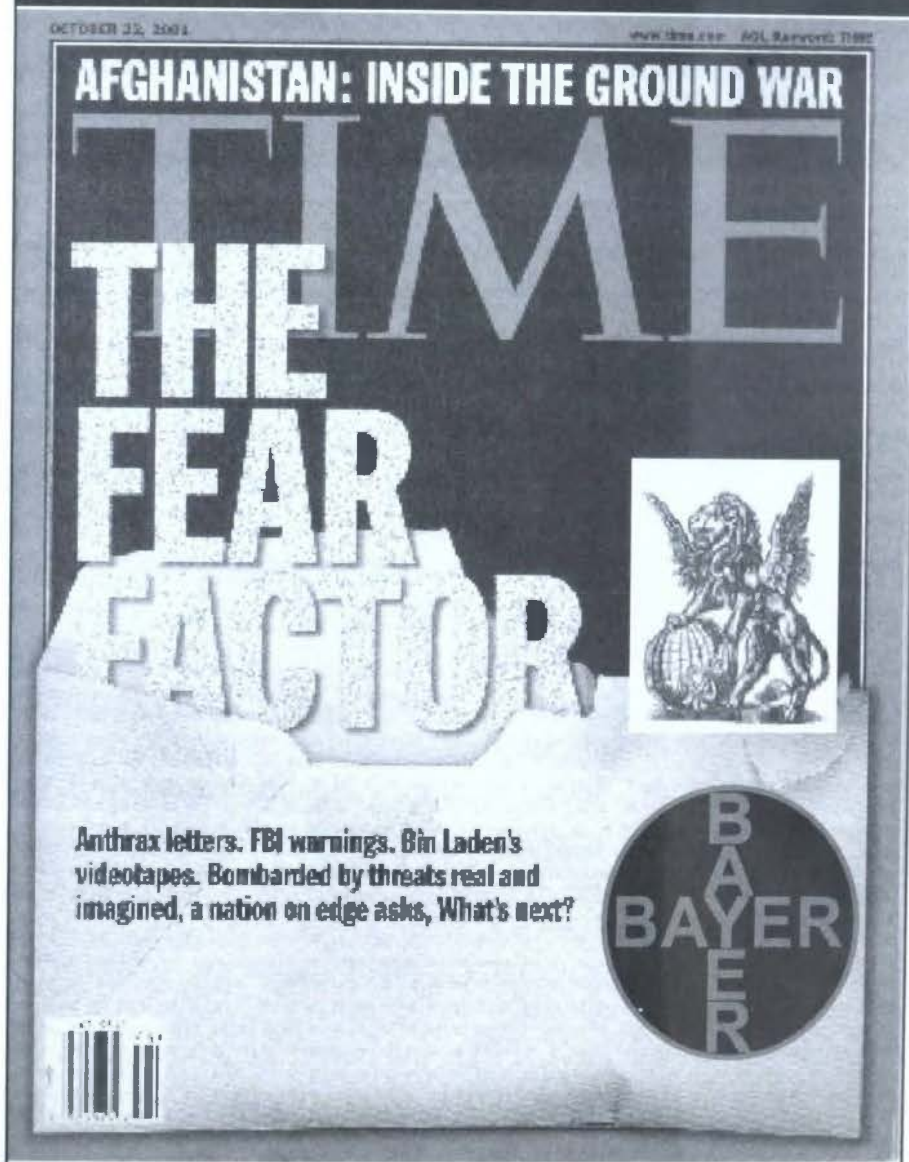
extremely suspicious given the history of these grossly under-tested risky vaccines and their corporate directors. Finally, the most stringent totalitarian population controls ever passed by congress resulted from the generated fright and media campaign. All of this was accomplished under the auspices of national security and “public health.”

Recalling the Scheme

To refresh your memory, during the later part of September, 2001—more than a week before the first publicly announced anthrax mailing—broadcasters such as Peter Jennings on the ABC Nightly News (September 26, 2001) began featuring the Bayer pharmaceutical company’s “anthrax antibiotic” CIPRO. This was unprecedented, highly suspicious, and very risky according to Dr. Horowitz. No mention, whatsoever, was made of far less costly and much less risky alternatives to mass population prophylaxis with CIPRO. The Food and Drug Administration (FDA) and Centers for Disease Control and Prevention (CDC) had institutionalized CIPRO while, at the same time, they advanced a “Model State Emergency Health Powers Act” for infectious disease and bioterrorism response that was more totalitarian than humanitarian. States were strongly encouraged, politically pressured in fact, to enact this legislation that authorized forced quarantine of large urban populations. States were given “public health authority” to force mass drugings with risky pharmaceuticals such as CIPRO, and coerce general acceptance of highly contested vaccinations, especially those for anthrax and smallpox . This, despite the fact that the entire legislative package presented unprecedented risks to society with unproven benefits.(Tetrahedron, 2001; CDC, 2001)

Due to the media-induced panic, with officials’ and celebrities’ endorsements, CIPRO sales skyrocketed more than 1000%. At a single customer’s cost of \$700 for a mere sixty-day prescription, the resulting revenue helped rescue the German-based Bayer company from the brink of bankruptcy.(McHugh, 2001)

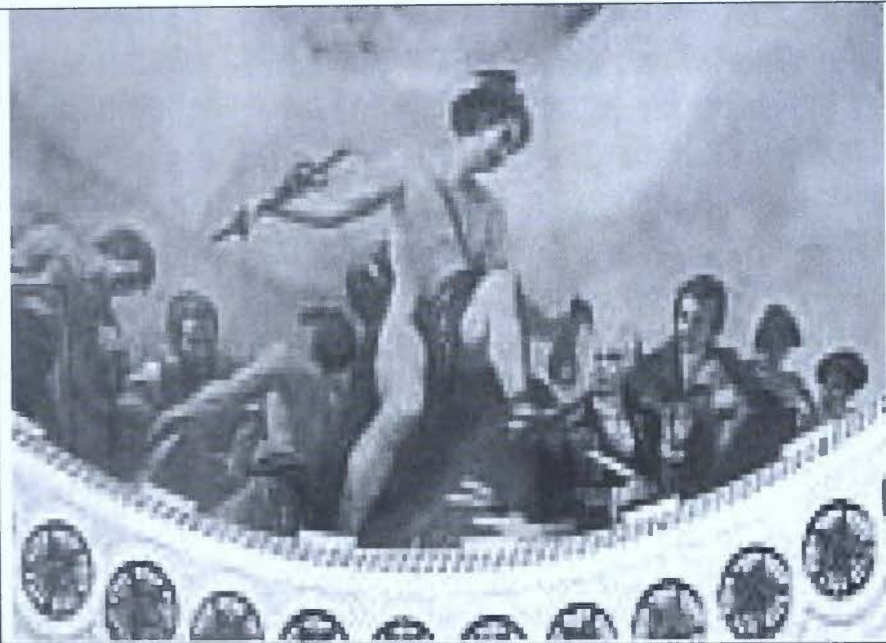
Fig. 10.1. CIA Mass Mediated Social Control



One of numerous "news" reports that, in reality, mainly served the political and economic agendas of the white-collar bioterrorists. The first beneficiary of the anthrax mailings was IG Farben's parent company Bayer, AG. The CIPRO maker was reportedly in financial trouble immediately before the mailings. Their famous "BAYER Red Cross" logo (inset) is, not by serendipity, like the original "Rose Croix" historically detailed in figures 9.5 and 9.6. The original (1886) Bayer AG logo is

Fig. 10.1. continued . . .

(inset) above the modern logo. It presents the European royalty's lion with the wings and staff of mercury (also the medical insignia). This symbol is repeated in the photo below. This icon of drug industry influence over global governments was taken from the dome-of-the-rotunda of the Capital Building in Washington, DC. It also depicts the Greek god Mercury with the medical insignia in his right hand. Notice his left hand is bribing legislators with a bag full of gold for penning favorable legislation. Such was the FDA's unprecedented exclusive selection of CIPRO for anthrax. This resulted in thousands of people becoming chronically ill from taking the largely untested antibiotic.



Dr. Horowitz believes the Anglo-American-directed global petrochemicalpharmaceutical cartel orchestrated the mailings and media response through the U.S. Central Intelligence Agency. The CIA is additionally implicated as their contractors were engaged in the development and testing of this novel strain of mailed anthrax prior to the mailings. Ironically, the agency oversees all American health science agencies, while also directing mainstream media "spins." Source: Horowitz LG. "Anthrax, Smallpox, Vaccinations and the Mark of the Beast." Video production by Tetrahedron Publishing Group, 2003.

Then, Department of Health and Human Services (HHS) Secretary Tommy Thompson rushed to spend millions more on a “special” CIPRO contract in further defense of the nation’s health.(Bradsher , 2001) By November, more than 30,000 panicked people in the United States were taking CIPRO for feared anthrax exposures.(Miller and Johnston, 2001) Still unreported by the mainstream media was the grave likelihood that given CIPRO’s myriad side effects, and largely untested status, more people were likely to die from taking the drug than the handful who had succumbed from mailed anthrax. Months later, Dr. Horowitz’s fears and dire predictions regarding CIPRO’s toxicity came true. A few select news servers, including the *Washington Times*, reported half of all CIPRO recipients suffered long term side effects.(O’Meara, 2001)

Meanwhile, the deadly mailings—a form of serial homicide—had seemingly stumped our nation’s most adroit sleuths. From a criminal investigator’s perspective, the most obvious questions remained to be asked, especially, “Who benefited financially and otherwise from the mailings?”

Dr. Horowitz prescribed “Occum’s Razor Analysis” for investigating officials. Occum held that the most obvious explanation for a mystery is typically the most accurate one. Homicide detectives, in this case investigators at the FBI, were aware of this too. They learned enough in their training to simply “follow the money.” A rule-of-thumb always considered by detectives is that lethal motives often involve economic rewards. Targeted were high profile mainstream media and Capitol Hill officials. Thus, the most relevant question Dr. Horowitz urged FBI officials to ask during their anthrax mailings investigation was, “What financial ends might exist for bioterrorism targeting major public opinion and political leaders?” The answer heavily implicated Bayer and a handful of related drug and genetic engineering firms.

During a previous investigation, Dr. Horowitz had become familiar with FBI investigatory protocols for serial slayings. Between 1990 and 1993 he used the FBI's official methods and materials for investigating, and ultimately solving, one of the highest profile serial homicides in history. His ninth book, *Deadly Innocence: The Kimberly Bergalis Case—Solving the Greatest Mystery in the Annals of American Medicine*, dealt with the case of a Florida dentist that infected at least six patients with his strain of HIV/AIDS. The FBI's "motivational model" for serial homicide was used by Horowitz in that case to evaluate the possibly intentional transmission of that infectious agent by the dentist. Dr. Horowitz concluded that this criminal suspect sought, much like the anthrax mailing suspects, to garner national media attention. The Florida dentist had concluded that the AIDS-virus, from which he was dying, was a government biological weapons lab creation. He believed that the genocidal weapon was subsequently distributed through contaminated vaccines. Prior to *Deadly Innocence*, Dr. Horowitz published three peer-reviewed scientific articles that employed the FBI's "motivational model for sexual homicide." This was developed by behavioral scientists to assist bureau investigators in reviewing the developmental histories of their principle suspects, while analyzing their potential motives (including profit motives), to best explain mysterious serial killings. The same approach was obviously indicated in the anthrax mailings case, and so it was used by Horowitz.(Horowitz, 1993)

On December 2 and 3, 2001, following numerous press releases sent out by Dr. Horowitz and his affiliates to more than 8,000 mainstream news and science reporters, the *Washington Times* and the *New York Times* finally focused on the concerns he raised regarding the likelihood that U.S. military biological weapons contractors were the source of the mailed anthrax.(O'Meara, 2001, Broad, Dec. 3, 2001)

A few days later, after distributing a definitive 20-page referenced report on the anthrax mailings that eventually reached more than 500,000 American readers, the *Baltimore Sun*, *New York Times*, and *Washington Post*, published Dr. Horowitz's leads. Their reports included additional testimonies by "anonymous" experts and officials who, like he, had felt compelled to relay urgent truths in defense of the American people. Expert consensus concluded the mailings had been a "white collar crime" perpetrated by espionage agents operating within the military and/or pharmaceutical industry.(Scott, 2001)

Crude biological weapons production equipment had not been used in this attack. The anthrax had not been made in some lunatic's basement. It sprang from a very sophisticated covert operation that required expensive military anthrax production and genetic engineering knowhow—technology only available in *very few* places. Manufactured anthrax frights had already been evaluated by leading scientists.(Cole, 1999) This mystery had all the earmarks of a military-style psychological operation (PSYOP) and "white-collar bioterrorist attack." Newspapers, largely due to Dr. Horowitz's relentless efforts, finally cited the most likely institutional suspects in the case. Pharmaceutical companies and military/CIA contractors tied to the "anthrax antibiotic" CIPRO and anthrax vaccine maker Bioprot, led the short list.(Broad, 2001; Scott, 2001)

The Flow Chart

Dr. Horowitz developed the diagram shown in figure 10.2. to help those who wished to help themselves gain the most rational explanation for the anthrax mailings and related outcomes. He sent this "flow chart" along with his special report to approximately 1,500 FBI employees. It depicted the relationships between the chief military-industrial suspects, and followed a sequenced text that evidenced the organizational dynamics through which a relatively broad anthrax mailings conspiracy was appar-

ently effected. In the process of reading this information, you will begin to appreciate the insidious connections between leading genetic industrialists and biotechnology firms, the pharmaceutical cartel, and the Anglo-American global elite discussed in the previous chapter.

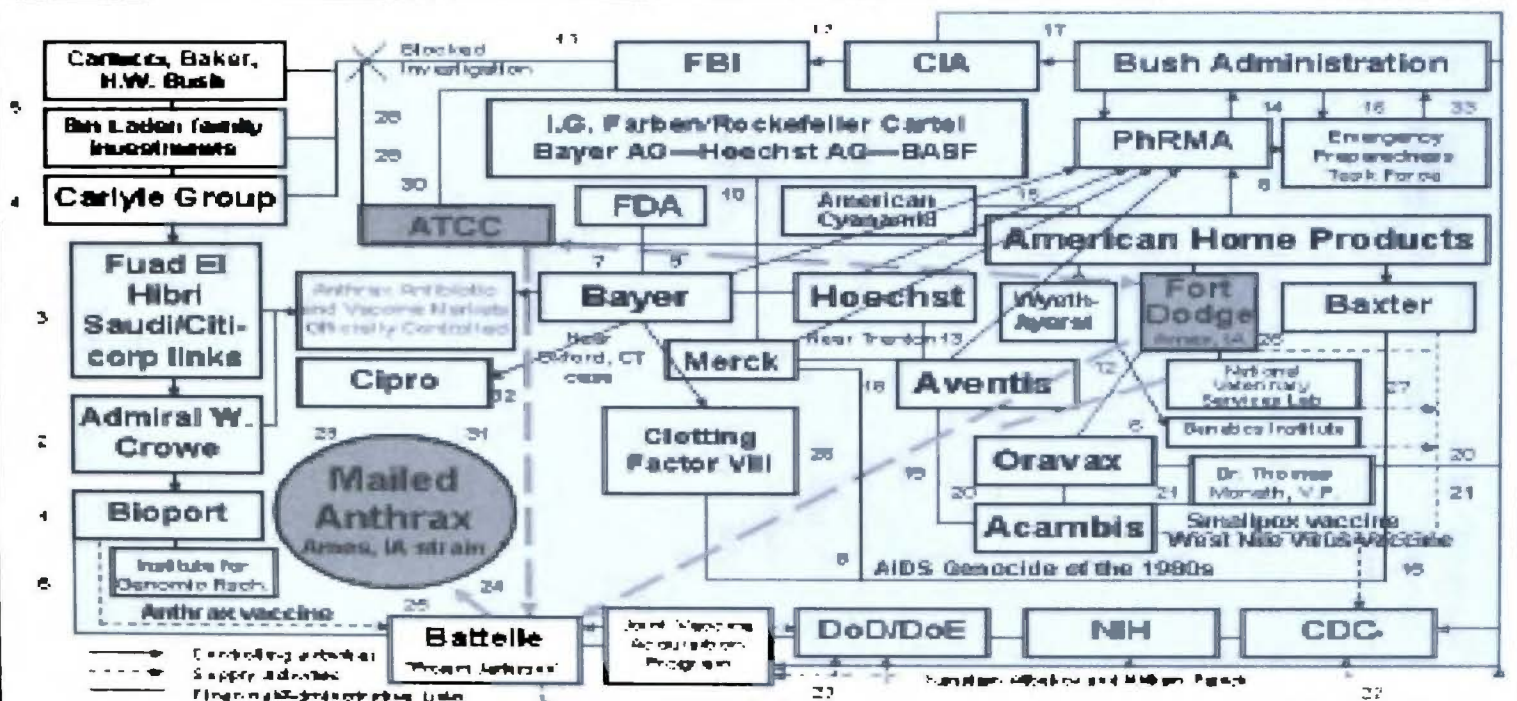
For the sake of clarity we have maintained the text numbers corresponding to the numbers shown on the flow chart in quoting liberally from Dr. Horowitz's report.

Background on the Anthrax Vaccine Maker—Bioport

On March 16, 1999, Robert C. Myers, DVM, Chief Operating Officer of Bioport (1)—America's only anthrax vaccine maker—appealed to a Senate Appropriations Committee for urgent funding for both anthrax and smallpox vaccines. Bioport had worked closely with the *Institute for Genomic Research*, cited later in this chapter as central to the Human Genome Project *heist*, to develop their highly contested anthrax vaccine. The company had been reprimanded by congressional investigators for many trust violations, including unsafe vaccine production and inadequate testing. In 1996, in his own words, Dr. Myers stated he “was part of a team of organizations, led by *Battelle Memorial Institute*, which came together to compete for the [DoD's Joint Vaccine Acquisition Program] JVAP.”(23) Despite there being dozens of potential biological weapons threats wielded by bioterrorists, Myers stated these two threats were the greatest since anthrax is easy to handle and “because smallpox is highly contagious and probably most of the world is now susceptible. . . .”

Again, this was 1996. Bioport was *exclusively producing the anthrax vaccine* for the U.S. military. But rather than pushing only anthrax vaccine, Dr. Myers also testified on behalf of smallpox vaccine makers. He said, “Suppose we have a smallpox vaccine stockpile and a manufacturing capability. . . . Funding for adequate security must be included in this program if the threat is to be optimally minimized. Included in these security measures,

Fig. 10.2. Leading Suspects in the Anthrax Mailings Case



The above flow chart was developed by Dr. Leonard G. Horowitz in November 2001, in an effort to aid FBI investigators in their analysis of suspects in the anthrax mailings case that began in early October. FBI officials entirely neglected Dr. Horowitz's direction and later made him a "criminal suspect" in the case.

and to prevent against natural disaster, there should be two or more geographically separate manufacturing facilities, and two or more facilities for storage of the manufactured vaccine.” He further stated that few companies wished to become involved in the production of anthrax and smallpox vaccines due to the high expense and risks involved in research and development.

At that time, and at the time of the anthrax mailings, the only other companies linked to smallpox vaccine production were Baxter, Aventis (Hoechst-Rhone Poulenc subsidiary) OraVax/Acambis, and Fort Dodge Animal Health. The links between these companies are depicted in the flow chart. (See figure 10.2.) Bayer and Hoechst were additionally linked by their infamy as IG Farben parents and progeny. Baxter was also related to the FarbenRockefeller cartel through American Home Products, its parent company.

In September 1998, Biopart Corporation took over a failing anthrax vaccine business from the state-owned Michigan Biologic Products Institute. Less than a month later, the company landed an exclusive \$29 million highly contested and controversial contract with the Department of Defense to “manufacture, test, bottle and store the anthrax vaccine.” Admiral William J. Crowe, Jr., (2) a former Chairman of the Joint Chiefs of Staff and close personal aid to President Clinton, with no financial investment of his own, somehow secured 22.5% of Biopart’s stock to promote, gain, and manage military anthrax vaccine contracts.(Department of Defense, 2000)

Biopart’s principal investor was Saudi business man Fuad El-Hibri (3)—a close friend of the bin Laden family, and a previous merger and acquisitions manager for the Rockefeller-linked Citigroup in New York.(Department of Defense, 2000; Irvine and Kincaid, 2001)

According to confirmed reports,(Skolnick, 2001) Biopart shares of stock were held by The Carlyle Management Group—America’s 11th leading defense investment firm largely directed

by past CIA director Frank Carlucci III, James Baker III, George H.W. Bush, and former British Prime Minister John Major.

According to the Associated Press, Past President George H.W. Bush served the Carlyle Group (4) and wealthy Saudi families including the bin Ladens, as a business agent. (Associated Press, 2001)

Journalist Ian Gurney provided additional evidence linking Osama bin Laden's al-Qaeda network to Bioport in a report issued over the Internet on December 19, 2001. According to the original story published on December 1, by the Pakistan News Service, documents originating from the US Defense Department that referred to Bioport, Inc. were found in the possession of the al-Qaeda in Kabul, Afghanistan. The documents contained highlighted items and stars scribbled across the top of one page. According to Bioport spokeswoman Kim Brennen-Root, "The document was a report on the environmental impact of renovations to our Lansing, Michigan plant, not a 'how-to' manual on making the vaccine." Rather than publicizing this discovery for what it was—Osama bin Laden's family scrutinizing their Bioport investment, Brennen-Root stated that the discovery merely supported "the notion that the al-Qaeda and the Taliban have been studying biological warfare and protecting against weapons of mass destruction." There was a far greater likelihood that Osama bin Laden, in light of his family's investments in the Carlyle Group and their similar ties to Bioport, simply desired to keep tabs on the company. (Gurney, 2001) Without mentioning this, the synchronous *Time Magazine's* feature story, with the words "FEAR," "AFGHANISTAN," "FBI," "Anthrax letters," and "Bin Laden" dominating the cover, was ironically suggestive of "cover" *propaganda*. (See figure 10.1.)

It should be understood that Bioport exists as a front-company for the British oligarchy controlled (5) Porton Down establishment. Porton Down is Britain's leading biological weapons research and development entity. Over the years, as lucrative

inventions developed from Porton Down's publicly-funded research, these were either licensed, patented, and/or otherwise spun-off for private corporate profiteering. (The same deception and theft routinely occurs in the United States as this chapter documents.) Bioport evolved its corporate identity from BioPort, previously Porton International—a for profit subsidiary spun from Porton Down.

From 1998 to 2001, Bioport successfully navigated through a steady storm of controversy and illegalities to secure ongoing defense contracts and government endorsements (6) for its anthrax vaccine. (Department of Defense, 2000; Irvine and Kincaid, 2001; Staff, *Washington Times*, 2001; Stolberg, 2001) On December 19-20, *The New York Times* reported that Bioport's vaccine was being offered by government officials to civilians possibly exposed to the mailed anthrax. In response, Connecticut Republican Representative Christopher Shays articulated the opposition's concern regarding the general danger for people "to take a vaccine that hasn't been approved by the FDA and that was made in a plant that hasn't been approved either." (Rosenbaum and Stolberg, 2001)

Additional Background on "Anthrax Antibiotic" Maker—Bayer

In July 2000, Germany's Bayer AG (7) negotiated an unprecedented exclusive endorsement from the FDA for their antibiotic CIPRO in case of an anthrax attack. This despite the drug's high risk, high price, and largely untested status. (O'Meara, November, 2001)

Shortly thereafter, *USA Today* reported a study of conflicting interests on the part of FDA advisory committees that were endorsing drug policies. Author Dennis Cauchon wrote that between January 1, 1998 and June 30, 2000, during 92% of the 159 meetings, "at least one member had a financial conflict of interest. At 55% of meetings, half or more of the FDA advisers

had conflicts of interest. Conflicts were most frequent at the 57 meetings when broader issues were discussed: 92% of members had conflicts. At the 102 meetings dealing with the fate of a specific drug, 33% of the experts had a financial conflict.”(Cauchon, 2000) Given this background, it is most reasonable to speculate that the FDA’s unprecedented selection of Bayer’s largely untested and outrageously expensive CIPRO for anthrax reflected special and grossly conflicting financial interests.

Foreshadowing this devil-doing, during the 1980s, Bayer AG and Baxter Healthcare (8) both marketed blood clotting factor VIII. Both firms were found guilty of knowingly transmitting the AIDS virus (HIV) to more than 7,000 American hemophiliacs. Both firms settled out of court for what amounted to economically motivated genocide. Again, Baxter’s parent company—American Home Products—evolved from the Bayer/IG Farben/Rockefeller petrochemicalpharmaceutical consortium that sustained, more than any other business group, Hitler and their Third Reich.(Massie, 1997; Manning, 1981)

World War II Background

Bayer Company President, Hermann Schmitz (10) directed this heart of the Third Reich beast—I.G. Farben. Farben’s top officials included and/or directed Hitler’s Gestapo. Schmitz was found guilty at Nuremberg trials for running Nazi labor camps. He merely served four years in prison.

According to CBS News war correspondent Paul Manning, Schmitz held more shares of Rockefeller Standard Oil Co. stock than any individual Rockefeller. Farben’s principle partners, Bayer and Rockefeller’s Standard Oil Company, profited greatly from World War II. A Federal Court judgment cited the Standard Oil Co. as America’s “Enemy National,” that is, a “traitor.” Bayer was blacklisted at that time by the U.S. Federal Government.(Manning, 1981)

Fig. 10.3. I.G. Farben Building in Frankfurt—Producers of Early War Gases and Pesticides



The I.G. Farben–Rockefeller chemical and pharmaceutical cartel complex in Germany (above) remained politically protected from allied bombings during WWII to become the CIA's headquarters following the war. Germany's leading industrial organization, established under Bayer corporation directorship, produced the earliest pesticides, drugs, and war gases including Zyklon B (shown below) used to kill millions of holocaust victims. Here, much like anthrax vaccines and CIPRO being touted today, people were persuaded to enter "showers" for "public health" and "disinfection." Bayer company president, Hermann Schmitz, along side others in the Third Reich and global banking cartel, dictated economic and industrial policies to Hitler and his financial minister Martin Bormann. The cartel arrangement between Rockefeller's Standard Oil Company and Farben included a noncompetitive sharing of global revenues from the petrochemical and pharmaceutical industries. Photos courtesy of the National Archives.(Griffin, 1997; Borkin 1997)



People question if the Bush family might have been likewise engaged in WWII profiteering. Their answers came from John Loftus, introduced earlier as an official U.S Government war crimes investigator and practicing attorney. Loftus reported that second to I.G. Farben, economic support for Hitler's war machine came from Fritz Thyssen—Germany's leading steel industrialist who also employed members of the Bush family to launder Nazi money. "The Bushes knew perfectly well," Loftus explained, "that Brown Brothers was the American money channel into Nazi Germany, and that Union Bank was the secret pipeline to bring the Nazi money back to America from Holland. The Bushes had to have known how the secret money circuit worked because they were on the board of directors in both directions: Brown Brothers out, Union Bank in.

"Moreover, the size of their compensation was commensurate with their risk as Nazi money launderers. In 1951, Prescott Bush and his father in law each received one share of Union Bank stock, worth \$750,000 each. One and a half million dollars was a lot of money in 1951. But then, from the Thyssen point of view, buying the Bushes was the best bargain of the war.

"The bottom line is harsh: It is bad enough that the Bush family helped raise the money for Thyssen to give Hitler his start in the 1920's, but giving aid and comfort to the enemy in time of war is treason. The Bush's bank helped the Theisens make the Nazi steel that killed allied soldiers. As bad as financing the Nazi war machine may seem, aiding and abetting the Holocaust was worse. Thyssen's coal mines used Jewish slaves as if they were disposable chemicals. There are six million skeletons in the Thyssen family closet, and a myriad of criminal and historical questions to be answered about the Bush family's complicity."(Loftus, 2002)

As shown in figure 10.2, and discussed further below, George Bush's Twenty-First Century administration (**14**) became actively engaged in questionably legal, if not criminal, unsafe drug

and vaccine policies and their administration. The president's "Emergency Preparedness Task Force," composed mainly of drug industry insiders, became especially active in this regard in the wake of the anthrax mailings.

During the late 1940s, I.G. Farben (10) was "decartelized" by the Allied High Commission led by America's John J. McCloy—a Philadelphia banker and lawyer with intimate ties to Rockefeller oil and banking interests. Farben stockholders received equal shares of Bayer, Hoechst, and BASF stock.(Manning, 1981; Borkin, 1997; Horowitz, 2001) Two of these three companies received more than \$1 billion for CIPRO and "emergency" vaccine supplies through the Bush administration directly following the mailings.

Other Farben/Rockefeller Subsidiaries and Activities

American Home Products (AHP) was formed in 1926 but evolved largely under the same direction as Bayer, Hoechst and BASF, that is, from the I.G. Farben/Rockefeller financial empire according to cancer researcher and journalist G. Edward Griffin.(Griffin, 1997) During WWII, Ayerst Laboratories joined AHP and Wyeth International Limited was formed. This company went on to "perfect" the smallpox vaccine according to company promotions.(American Home Products, 2000)

The Institute for Genomic Research (12), an offshoot of the Rockefeller initiated and dominated genetics industry, evolved from a biotech research unit of AHP/Wyeth-Ayerst. The Institute contributed to Baxter's product line of genetically engineered products, as did AHP, including the smallpox vaccine.(Horowitz, 2001, Wyeth Genetics, 2001; American Home Products, 2001)

Aventis Pharma (13), with headquarters in Frankfurt, Germany—coincidentally the home of I.G. Farben and the postwar CIA—was formed by Hoechst AG and Rhone-Poulenc S.A. during their merger in 1999. American headquarters of the company was in Bridgewater, NJ, also not far from Trenton where the first anthrax mailings originated.(Aventis, 2001)

The politically powerful Pharmaceutical Research and Manufacturers Association (PhRMA)(14) was directed at the time of the anthrax mailings by Aventis's CEO Richard Markham. Mr. Markham was also Chairman of President Bush's Task Force on Emergency Preparedness that met regularly with top administration officials to prepare drug and vaccine purchase orders for the U.S. military and federal government. The Bayer and Merck companies were also heavily represented in PhRMA and its bioterrorism task force.(Aventis, 2001) As detailed in figure 10.4, the Merck company became a primary recipient of Nazi "flight capital" at the time their company's president, George W. Merck, was America's biological weapons industry director.(Horowitz and Martin, 1998) According to Paul Manning, who credited CIA director Allen Dulles for his intelligence and guidance during his investigation, the "flight capital scheme" assured the rise of a Nazi "Fourth Reich." It was alternatively called the "Neuordnung"—New Order—for the global petrochemical-pharmaceutical and banking cartels.(Manning, 1981)

One example of the steady stream of incestuous mergers and acquisitions within the IG Farben/Rockefeller group is American Cyanamid's purchase by AHP in 1994. American Cyanamid (15) is infamous for producing, through Lederle Labs, monkey cancer virus (SV40) contaminated polio vaccines linked to several contemporary cancer epidemics.(Horowitz and Martin, 1998) AHP then sold its Cyanamid Agricultural Products business, including carcinogenic pesticides said to reduce the spread of the West Nile Virus, to BASF Aktiengesellschaft in June 2000.(CNNfn, 2000) In *Death in the Air: Globalism, Terrorism and Toxic Warfare*, Dr. Horowitz researched the toxic pesticides being used to combat the alleged spread of the West Nile Virus. These included Malathion and Anvil 10:10 made by the Rockefeller-controlled Chevron company. Generally overlooked are the serious risks to the public's health from spraying these toxic and carcinogenic pesticides.(Horowitz, 2001)

Financial Motive for Mailing Anthrax

PhRMA officials (16) had met regularly and illegally with Bush administration officials under the auspices of “emergency preparedness” around the time of the anthrax mailings according to The Public Citizen in November, 2001. This consumer-funded political watchdog group documented that multimillion dollar drug and vaccine contracts had emerged from these mostly secret meetings. These violated the Federal Advisory Committee Act—a transparency law enacted to protect consumers against closed-door dealings between government and special interests.(The Public Citizen, 2001)

As Dr. Horowitz explained in *Emerging Viruses: AIDS & Ebola—Nature, Accident or Intentional?*, that the CIA, according to their past director James Woolsey, has functioned largely on behalf of multinational corporations since the end of the Cold War. He called it “industrial espionage.” Dr. Horowitz brought this congressional testimony to light while considering “industrial sabotage” for population control associated with AIDS, more aptly-named *genocide*.(Horowitz and Martin, 1998) Horowitz described and documented related CIA activities, particularly the waging of propaganda wars and cover-ups in the realm of biological warfare, and especially those leading to vaccine and blood product sales. It has been well established that officials of the Rockefeller-founded and highly misdirected blood industry knowingly permitted HIV to be transmitted to their customers during the 1980s, and possibly beyond, as a form of economically-driven genocide.

The BBC and London’s leading Sunday newspaper, *The Guardian*, reported (Nov. 7, 2001) that the Bush administration, through the CIA (17), hog-tied the FBI in their investigations linking Bush and bin Laden family investments in the Carlyle Management Group. These mutual Carlyle investments had profound implications likely affecting the FBI’s anthrax mailings

investigation of Biopart and the Battelle Memorial Institute for additional reasons cited below.(Palast, 2001)

Based on the illegal meetings held by Bush administration officials and Aventis's CEO Richard Markham, who was also Chairman of President Bush's Task Force on Emergency Preparedness at the time of the meetings, Aventis Pharma AG **(18)** was granted a lucrative smallpox vaccine order from the federal government.

Dr. Horowitz alerted the FBI that Aventis, along with Bayer, Hoechst, and Merck & Co. all had major plants within 45-minutes drive of Trenton, NJ where most of the anthrax mailings originated. Moreover, Aventis's European operations are jointly (50:50) owned by the Merck drug company. This world's largest vaccine maker had been under official investigation for producing contaminated vaccinations—polio, hepatitis B, and smallpox—some of which have been scientifically implicated in transmitting HIV/AIDS to Africans and gay men in New York.(Aventis Media Center, 2001; Horowitz and Martin, 1998)

Aventis also collaborated with Oravax/Acambis **(19)** to produce the more than 250 million doses of recycled AyerstAH-PWyeth smallpox vaccine for the federal government's initial order. This fulfilled the recommendations provided by Robert Myers, Biopart's Chief Operating Officer in 1999, to the U.S. Congress that his company, and at least one other, be able to produce enough anthrax and smallpox vaccines to guard against bioterrorism. The Aventis/Acambis 20-year contract, awarded by the CDC, was alone worth \$343 million for a 40 million dose stockpile.(U.S. Government Reform Subcommittee, 1999; Aventis Media Center, 2001) In addition, the combined total federal government rush order to these companies for anthrax and smallpox vaccines in the weeks following the anthrax mailings approached \$500 million.

Fig. 10.4. Merck & Company, Inc. Corporate Headquarters in New Jersey Near Trenton



Shown above is the Merck & Company, Inc. new headquarters under construction in Readington Township, NJ. The new complex, not far from other leading drug companies' headquarters, lies within easy driving distance to Trenton, NJ where the bulk of anthrax mailings originated. The Merck headquarters building, shown under construction here, is a "hexagonal building," reflecting on the sacred geometry discussed in earlier chapters.

Besides Bayer and Hoechst profiting from the WWII holocaust. Merck & Company, according to historic records, obtained a principle share of the Nazi "flight capital" on August 10, 1944. This money transfer occurred during the allied invasion of Germany near the end of the war. Allied with directors of the I.G. Farben cartel, George W. Merck's conflict of interest was stunning. President Roosevelt had named the Merck company president director of America's biological weapons industry! According to CBS News correspondent Paul Manning, CIA director Allen Dulles masterminded the "flight capital scheme" assuring the rise of a Fourth Reich. It was alternatively called by members of Hitler's Third Reich, the "Neuordnung" New Order. This vision called for a 1,000 year reign for their global petrochemical-pharmaceutical and banking cartel.(Manning, 1981; Horowitz, 2001)

Acambis, it should be recalled, evolved from OraVax which was allied with Baxter Healthcare (20) under orders to produce smallpox and West Nile Virus vaccines. Aventis fully funded the OraVax/Acambis dengue fever vaccine, and subsidized other joint ventures, as well. Months before 9-11, the CDC awarded Acambis a 20-year contract to develop a new smallpox vaccine using the old stockpiles that had been previously purchased and paid for by the US Government and taxpayers.(OraVax Company Release, 2001)

Apparent Origin of the Weaponized Anthrax

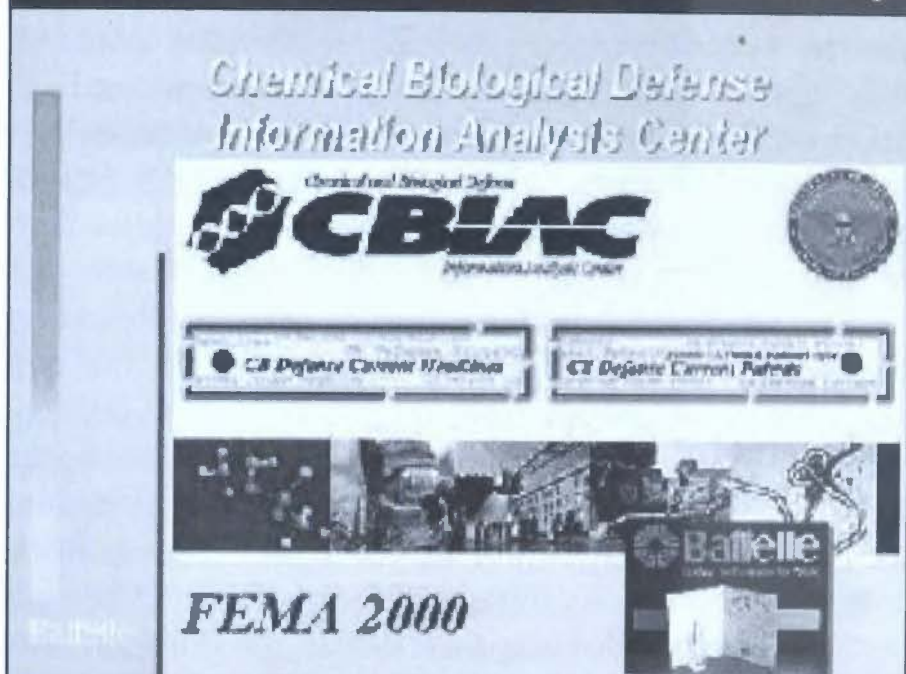
In April, 1998, OraVax/Acambis Vice President, Dr. Thomas Monath (21) met with President Clinton during an infamous meeting regarding vaccinations. Also present at the private session was New York's Emergency Management Director at the time, Jerry Hauer, who the Bush administration later selected to direct the post 9-11 national emergency response agency. Participating too was Rockefeller University president emeritus and American Type Culture Collection (ATCC) curator, Dr. Joshua Lederberg; CIA Director John Deutsch; Dr. Barbara Hatch Rosenberg, a biological weapons industry insider; and military anthrax expert William C. Patrick, III. Under discussion was the first of several multimillion dollar anthrax, smallpox, and West Nile Virus vaccine contracts. According to *New York Times* reporters William Broad and Judith Miller, "seven scientists endorsed the stockpile...."(Broad and Miller, 2001) These included "two men who stood to gain financially from the decision. . . ." The chief profiteers were Dr. Monath and Dr. J. Craig Venter, president of The Institute for Genomic Research near Washington. Dr. Venter, it was reported, was working on anthrax genetics at the time. His central role in the Human Genome Project is reported below.(Horowitz, 2001; Broad and Miller, 1998)

Around the same time, according to reporter William Broad,(Broad, 2001) William C. Patrick, III, (22) was commissioned to compile a report for an undisclosed government contractor concerning the *ramifications of mailing aerosolizable anthrax*. Following the mailings, investigators Broad and Miller cited the published paper of the “private expert in biological weapons,” Dr. Barbara Hatch Rosenberg, in which she contended “that a government insider, or someone in contact with an insider, . . .” was responsible for the mailed anthrax. “One official close to the federal investigation called the Rosenberg theory ‘the most likely hypothesis,’” according to the *New York Times* article. [Emphasis added]

Given this most credible theory, obvious suspects among the government “insiders” with economic and/or political motives to mail anthrax were doctors Monath and Venter who, incredibly, were politically insulated from the FBI’s investigation. Other immune suspects included officials at Bioport and allied smallpox vaccine makers OraVax/Acambis, Baxter, Aventis, and Bayer. As discussed in figure 10.5, the most important suspect, the apparent producer of the mailed anthrax strain, was the U.S. Department of Energy and multinational military contractor, *Battelle Memorial Institute’s* Chemical and Biological Information Analysis Center. Their bioweapons research, development, and testing labs in West Jefferson, Ohio and Dugway Proving Grounds in Utah, also received immunity against investigation. (A summary of Battelle’s CBW operations was posted on their website at the time of this writing at <http://www.nbcindustrygroup.com/battell.htm>.)

Astonishingly, a photograph of the specific building in which the Ames strain of hyperweaponized powdered anthrax was tested appeared on the Internet courtesy of the Federal Emergency Management Agency (FEMA). (See figure 10.5.) This photo further established, as detailed in BMI’s operations description, the

Fig. 10.5. BMI, Anthrax, Genetics, U.S. Military Defense and Homeland Insecurity



Notice the six-sided hexagonal structure of the genetics logo in the above slide from the U.S. Government Chemical and Biological Defense Information Analysis Center (CBIAC). This organization worked most exclusively for the CIA and DoD. This graphic derives from a joint Battelle Memorial Institute (BMI)Federal Emergency Management Agency (FEMA) slide presentation. This, along with Battelle website data, provides evidence of the direction and orchestration of all U.S. military branches and defense agencies, including the Department of Homeland Security, against chemical and biological attacks by this privately owned and operated, reportedly non-profit, BMI.

Note also on the opposite page their website features intelligence on "Anthrax, mail, and related topics." Evidence presented by Dr. Horowitz to thousands of FBI personnel and mainstream news producers was never posted here. Nor was Battelle's *glaring conflict of interest*: BMI, exclusively contracted to secure America against biological and chemical attacks, was the source of the mailed anthrax.

During months leading up to the mailings, BMI subcontractors included the Russian defector Dr. Kanatjan Alibekov (alias, "Ken Alibek"), and U.S. anthrax ace William Patrick, III. Both men were also under contract during this period with the CIA's "Project Jefferson" (a.k.a. "Project Clearvision") directed by BMI. All became leading suspects in Dr. Horowitz's investigation of the serial homicide involving the never-before-seen hyperweaponized, silica-cut, electromagnetized, hyperconcentrated Ames, Iowa strain of anthrax that ended up being sent by mail to key members of the U.S. news media and Congress.

Continued. . .

Anthrax mailings headlines virtually ceased shortly after Dr. Horowitz transmitted his Dec. 10, 2001, investigation report to thousands of members of the national press. That morning he also discussed these concerns with *New York Times* reporter William Broad who, two days later, cited BMI as a leading insitutional suspect in his *Times* feature. It was the first, and nearly the last, time BMI had been mentioned by any dominant news source as a suspect in the ongoing case held as a "mystery."



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The BMI website boasts the CBIAC is "operated by BMI and supported by Horne Engineering Services, Inc., Innovative Emergency Management, Inc., MTS Technologies, Inc., QuickSilver Analytics, Inc., and SciTech, Inc., is a full service Department of Defense (DoD) Information Analysis Center (IAC) under contract to the Office of the Secretary of Defense (OSD) and administratively managed by the Defense Technical Information Center (DTIC) under the DoD IAC Program Office (Contract No.SPO700-00-D-3180). The CBIAC serves as the focal point for DoD Chemical and Biological Defense (CBD) scientific and technical information." (See: <http://www.cbiac.apgea.army.mil/> and <http://www.dtic.mil/jointvision/>).

direct association between the Dugway Proving Grounds “Life Sciences Facilities” and BMI’s “Aerosol Engineering & Biological Sciences Facilities.” (BMI, 2000 and 2001)

The Chief Anthrax Mailing Suspects

In a series of reports submitted to the FBI, Dr. Horowitz identified the Battelle Memorial Institute (BMI) of West Jefferson, Ohio, as a chief organizational suspect working in collaboration with the CIA on a top secret anthrax program. During this project, BMI anthrax experts developed unprecedented, hyper-weaponized, silica-impregnated, electro-magnetized, optimally concentrated anthrax. This precisely described what was later mailed from Trenton, New Jersey, St. Petersburg, Florida, Atlanta, and Malaysia, according to press reports. (Horowitz, 2001; Broad and Miller, 1998; Broad, 2001; Broad and Miller, 2001; Schmidt and Warrick, 2001; Epstein, 2001) The BMI-produced Ames strain of anthrax was then shipped to the Dugway Proving Grounds in Utah. Here at the “Life Sciences Laboratory,” also administered by BMI, the biological weapon was initially tested. (Horowitz, 2001; Scott, 2001)

According to the Associated Press (AP), a U.S. military project was funded to develop this advanced type of weapons-grade anthrax. AP interviewed Russian munitions expert Alexander Gorbovsky who voiced his government’s concern regarding the increased threat posed by the obviously active U.S. biological weapons program—a program that was supposed to have died with President Nixon’s 1969 signing of the 1925 Geneva Accord.

In early December 2000, an anonymous source at the Pentagon told Christopher Williams, a First Amendment activist and press investigator, that Battelle’s anthrax program was secretly referred to as “Project Jefferson.” Further research by Williams revealed Battelle Memorial Institute’s laboratories (24) in West

Jefferson, Ohio had been contracted for this purpose. According to *New York Times* reporter William Broad, a similar project preceded “Project Jefferson” called “Clearvision.”(Isachenkov, 2001)

This Battelle-managed anthrax program was ongoing around the time chief U.S. military anthrax specialist William Patrick, III, under contracts with BMI and the CIA, prepared a classified report about mailing powdered anthrax as a possible public health and national security threat. He analyzed and projected the diverse consequences of mailing this type of hyperweaponized anthrax. His report precisely foreshadowed the mailings. Again, according to the *NY Times*, Patrick III’s report was commissioned by an unidentified “contractor”—apparently the CIA’s contractor—Battelle.(Broad, 2001)

In other words, William Patrick, III, among the few persons knowledgeable enough to prepare and handle the anthrax letters, was commissioned to predict the toll such a mailing would levy on America. His presence, in 1998, at the infamous private meeting with President Clinton and doctors Monath and Venter to discuss government purchases of anthrax and smallpox vaccine is additionally suspicious. Moreover, according to admitted CIA consultant and exposed bioterror-propagandist Richard Preston,(Horowitz and Martin, 1998) William Patrick, III and the Russian defector turned CIA-anthrax-ace “Ken Alibek,” were close friends. Both were Cold War anthrax experts, and both held classified consulting contracts with the CIA *and* Battelle simultaneously. This was at the time of the infamous White House meeting from where it was decided to stockpile the risky anthrax and smallpox vaccines. In Preston’s article, both men were also using CIA-provided VISA cards.(Preston, 1998)

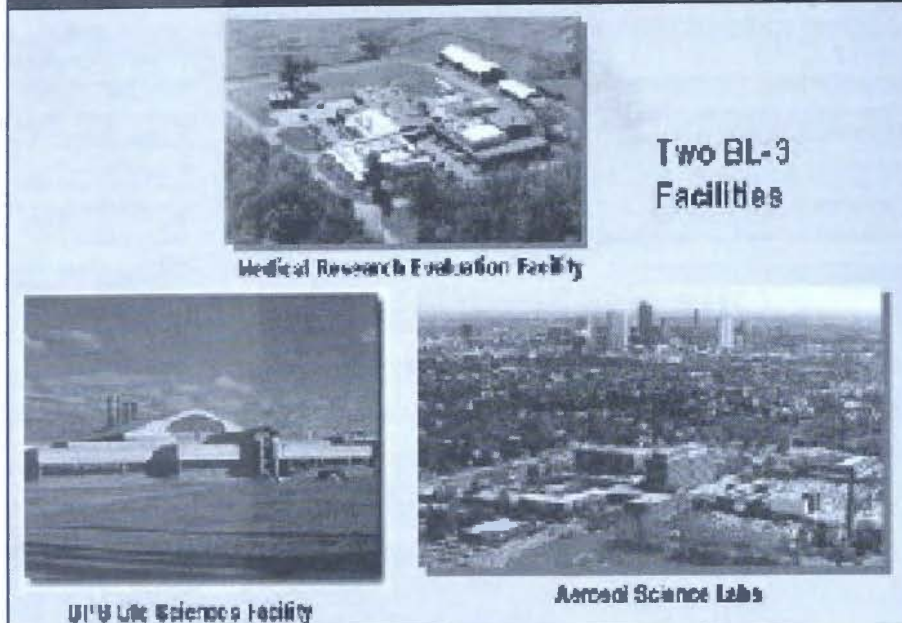
BMI, according to another part of its website (<http://www.battelle.org/nationsecurity/>), became a virtual one-stop military-science shopping-center for U.S. and foreign customers, the Department of Energy, the now globalized AEC, the national

security cryptocracy, and the agencies, organizations, and institutions evaluating every major aspect of modern methods of population control and environmental degradation. With nearly \$1 billion of business volume annually, Battelle's 7,500 scientists, engineers, and support specialists, were said to have designed and developed a wide variety of innovations from the uranium used in the top secret "Manhattan Project" of WWII to the Xerox copying process. In addition to their voluminous weapons research, development, and testing activities, this private institute co-managed America's most secret enterprises including the DoE's Brookhaven National Laboratory, National Renewable Energy Laboratory, Oak Ridge Laboratory, and fully managed several others including the Pacific Northwest National Laboratory. Their two biological level-3 "Aerosol Engineering & Biological Sciences Facilities" appeared in photographs reprinted in figure 10.6.

The BMI/Department of Energy combined web page explained on 12/7/01 at <http://battelle.org/doe/natsecurity.stm>, before it was quickly removed following the attention drawn to it by Dr. Horowitz and associates, that Battelle's "National Security" contract called for the administration of Brookhaven's "chemical/biological standoff detection technology" for which New York City was selected for an "interagency chemical exercise." Moreover, this test was conducted sometime prior to 9-11 and the new Millennium. Therefore, it would have involved Jerry Hauer. This fact additionally linked Battelle's chemical and biological warfare testing program to Hauer, who also met with doctors Venter and Monath in the Clinton White House in 1998 to discuss, highly suspiciously, additional vaccine provisions for the impending unprecedented West Nile virus (WNV) outbreak and national fright.(Horowitz, 2001 and 2001a)

The first New York WNV outbreak, and fright that ensued, occurred the following year. Therefore, Hauer, Monath, Venter et al.'s presidential lobby established the national political prece-

Fig. 10.6. "Life Sciences Facility" Dugway Proving Grounds for Mailed Anthrax



The "Life Sciences Facility" and Aerosol Science Labs administered by Battelle Memorial Institute at Dugway Proving Grounds in Utah are shown above. During the late 1990s these facilities were used to test the unique anthrax weapon that ended up being mailed from three locations internationally by undetermined agents of Battelle and the CIA respectively.

Battelle, the leading one-stop-shopping mall for governments and global elites interested in weapons of mass destruction, and military applications for population and weather control, environmental studies and technologies, genetic developments, and energy sources is intimately involved with the U.S. Department of Energy, and especially administration, research, and developments involving the nuclear energy and nuclear weapons industries. Battelle and its contractors also played major roles in developing Navy sonar, frequency broadcasting equipment applied in the "Star Wars" project (i.e., Strategic Defense Initiative [SDI]), electromagnetic weapons and even genetic weaponry of various kinds.

Battelle's "Defense Enterprise Integration Services" logo is shown on the next page. It depicts six stars on either side of the globe. Based on the revelations in Dr. Horowitz's book, *Death in the Air: Globalism, Terrorism and Toxic Warfare*, this arrangement reflects the coding system used by the British Royal Family and their premier Secret Service, MI6, the numerology of which dates back to the ancient Pythagorean mystery schools. The logo codes for "66" and embraces integrated military services for successful globalization. Much like "Phillips 66" and Route 66 America's highway the 6s are alpha-numeric equivalents to the Ss in Anglo-American intelligence organizations (i.e., Britain's, Germany's, and America's).

Continued on next page.

In American military circles, the terms "Special" connotes "Secret." Thus, the British "Secret Service," Nazi "SS," and "Special Services" division of the United States Army all code for "66" using the multiple of 6 decipher.

The infamous "Mark of the Beast" referred to in the Bible, "666" or "SSS" (derived again using the alphanumerics of the multiples of six, wherein A=6, B=12, C=18 . . . S=114 . . . Z=156; adjusted to the single digit Pythagorean integer [e.g., S=114 or 1+1+4 = 6]) is likewise reflected on every bar code, the VISA insignia, NATO's supercomputer in Brussels, Belgium, and the logo of the Atomic Energy Commission-directed Department of Energy-managed nuclear engineering laboratory adjacent the town of ARCO in southern Idaho. BML, again, is intimately involved in DoE administration, research, and developments involving nuclear energy. (Horowitz, 2001)



Defense Enterprise Integration Services (DEIS II)

The Defense Enterprise Integration Services (DEIS II) contract, funded by the Defense Information System Agency (DISA), allocates \$2.5 billion for modernizing the information infrastructure of the U. S. Department of Defense (DoD). An additional \$500 million is available to support the needs of other federal agencies.



Computer Sciences Corporation (CSC) is one of six prime contractors under the DEIS II contract. The CSC team includes over 40 companies who will bring a broad range of information technology skills to DEIS.

As part of the CSC team, Battelle's National Security Division will provide state-of-the-art information systems to DEIS clients. Battelle is a leader in the development of technologies related to information systems such as

- compact disk laser readers
- smart cards
- solid-state tags
- point-of-sale hardware
- factory floor automation
- scanning applications.

Battelle also brings expertise in logistics, finance, procurement, and electronic commerce to the CSC team. Through our support to the Electronic Commerce Resource Center, Battelle has an impact on state-of-the-art electronic commerce developments throughout the commercial and federal government sectors. With access

dents, including the public health response, in anticipation of the eventual WNV “outbreak” and similarly manufactured anthrax and smallpox frights.

Following, the 9/11/01 attacks on the World Trade Center in New York, Jerry Hauer, was promptly rewarded for his part in helping to manage the anticipated chaos ultimately resulting from this conspiracy to defraud, terrorize, and depopulate America. At the time of this writing, Mr. Hauer was appointed to serve as President Bush’s national director of emergency preparedness.(Horowitz, 2001)

Battelle’s “Aerosol Engineering and Biological Defense Science” description relayed their unequaled ability to develop, test, evaluate, and modify a variety of biological agent detection systems, as well as the germs themselves. This was done, they explained, “for the Joint Services including BL-3 [i.e., high biological safety level of containment] operations.” Moreover, while superficially publicizing their unique qualifications and activities in the realm of genetically engineering biological weapons, and developing chemicals for “defense,” detailed disclosures were largely classified then and completely censored now following 9-11.

Relating to their apparent development of the highly weaponized strain of anthrax in question, they reported their “Aerosol Science and Technology (AS&T) group develops lab experimental and field test procedures for . . . point-source emissions and the transport and atmospheric fate of aerosols by means of modeling and field assessments for industrial process.”

Thus, the government “contractor” for whom anthrax expert William Patrick, III wrote his mailed anthrax aerosol dispersal assessment could have only been Battelle. The same BMI for whom “Ken Alibek” worked; Robert Myers, Biopart’s Chief Operating Officer affiliated; and Jerry Hauer in New York’s emergency management helped facilitate their tests. All of these suspects (except Alibek), played roles in the Department of Defense’s

Joint Vaccine Acquisition Program that was accelerated due to the anthrax mailings, and culminated during the national fright campaign issued by the CIA through their media affiliates.

Most heavily implicated organizations are the CIA, Battelle, and Biopart. Each maintained financial and administrative links to highest level U.S. National Security officials, top government “defense” agencies in the United States and Britain, the DoD’s “Joint Vaccine Acquisition Program,” and the manufacture of the anthrax vaccine domestically and in the U.K.(U.S. Government Reform Subcommittee on National Security, Veterans Affairs, and International Relations, 1999)

Only days prior to the World Trade Center attacks (September 7, 2001) the Associated Press reported a “new strain” of extremely lethal anthrax had been under development before September 2001, by an unnamed U.S. biological weapons contractor. This fit William Patrick, III’s report in which he “said the American [anthrax] program had achieved a concentration of one trillion spores per gram.” How was William Patrick privy to this classified intelligence unless he had consulted, or worked, on the development of this anthrax? According to William Broad’s *New York Times* article, this concentration of the Ames strain of anthrax was globally unprecedented.(Broad, 2001) Even the Soviets were unable to produce weaponized anthrax concentrated beyond 500 billion spores per gram according Alibekov. No one else had come close to describing such concentrated anthrax powder. Given this astonishing fact alone, the FBI should have been able to quickly determine the few, if not single, U.S. military bioweapons contractor(s) capable of developing this unprecedented anthrax.

Again, it should be recognized that by April, 2000, the CIA had assumed all oversight at the CDC, and other health science agencies, allegedly to defend against infectious diseases considered national security risks.(Gellman, 2000) Following 9-11, this CIA oversight of the government’s top infectious disease

research laboratories clearly included anthrax and smallpox, and established the administrative mechanism for a massive conspiracy and cover-up.

Impeded Investigation

Again, according to FBI and military officials interviewed by the BBC and *The Guardian's* Greg Palast (Palast and Pallister, 2001), Bush administration officials and the CIA had blocked FBI investigations involving terror group financiers with ties to the Bush and bin Laden families, and by extension the vaccine makers with whom they held mutual investments. There are confirmed associations between the Carlyle Management Group and Bioport, the Bush and bin Laden families, and the British oligarchy that control Bioport's principle owner Porton Down. Thus, the FBI's inefficacy in solving the anthrax mailings mystery is politically reconciled. This does, of course, implicate highest level officials at the FBI, CIA, and Bush White House.

According to the *Washington Post*, by December 21, 2001, the FBI had still not investigated Porton Down for possible culpability in the anthrax mailings despite the fact the British bioweapons center maintained the *identical* Ames strain of anthrax, and through co-ownership in Bioport was connected with BMI and the DoD's lucrative "Joint Vaccine Acquisitions Program." (Schmidt and Warrick, 2001)

The *New York Times* had reported that FBI investigators, in search of clues, were refused access to certain pharmaceutical companies. These undisclosed companies were said to require court orders for official access to their facilities. No such court orders were subsequently reported. Shall we assume they never came? (Broad, Johnston, Miller and Zielbauer, 2001)

BMI's Genetic and Energy Department Connections

Now you know BMI as a premier U.S. Department of Defense (DOD) and U.S. Department of Energy (DOE) contractor.

What is not well known is that they have operated at the forefront of *genetic research* and developments in the public and private sectors as well. The DOE has heavily subsidized genetic biotechnological advances, and BMI for several decades.⁷ Included in their collaborative productions are genetically modified bacteria, viruses, and, like the new anthrax that came from BMI, biological weapons of mass destruction. Figure 10.7 displays a couple of the DOE's National Cancer Institute contracts in this domain.

For instance, the DOE Biology Division at Oak Ridge National Laboratory (ORNL), currently under the administrative direction of BMI, performed genetic studies on AIDS-like retroviruses capable of triggering cancers from RNA transcription rather than DNA as early as 1970. This predated HIV/AIDS by almost fifteen years.

Under the DOE's Division of Biomedical & Environmental Research, also located at the ORNL, researchers studied "co-carcinogenesis," that is, chemical along with genetic and other factors that could be used to transmit death.

At the Argonne National Laboratory, the DoE was also engaged in activating the "sarcoma virus genome" using radiation to induce AIDS-associated sarcoma cancers during the late 1960s and early 1970s.

Atomic Energy Commissioners, Biological Warfare, and the Human Genome Project

In 1998, Dr. Horowitz revealed startling associations between Atomic Energy Commission (AEC) officials and directors of an extremely dangerous "Special Virus Cancer Program." This largely funded mostly secret cancer virology program became the subject of a special U.S. General Accounting Office (GAO) investigation in 2001 that entirely suppressed evidence the official investigators obtained from Dr. Horowitz and documented in the text by Horowitz and Martin (1998) and on the website www.originofAIDS.com. Here, reprinted U.S. Government documents

proved that numerous leukemia, lymphoma, and sarcoma viruses, others functionally identical to HIV/AIDS and Ebola, the mad cow disease prion agent initially called “Kuru,” even flu virus recombinants that could spread cancer through the air by sneezing or spraying, were bioengineered by leading military contractors on behalf of the National Cancer Institute and U.S. Department of Defense between the early 1960s and late 1970s.

According to congressional testimonies by past CIA directors William Colby and Richard Helms, the agency’s top secret biological weapons program remained discretely under Kissinger’s oversight as their National Security Advisor. As the corporate director of Kissinger and Associates in New York, Nelson Rockefeller’s protégé continued using his political influence on behalf of many of the world’s largest and powerful companies engaged in everything from atomic energy to vaccinations. His National Security Advisor post during the Nixon era was granted following his service to American intelligence and energy industrialists when he helped bring ex-Nazi scientists, including V2 missile project official Werner von Braun to the United States. At the CFR’s nuclear weapons study group, beginning in November, 1954, Kissinger’s group met almost monthly. It was chaired by the former head of the AEC, Gordon Dean. David Rockefeller also graced the group meetings and, soon thereafter, acquired two chairmanships: one of the CFR and the other of the Case Bank.(Horowitz, 2001)

Contracts reprinted in *Emerging Viruses: AIDS & Ebola*, like the ones listed in figure 10.7 showed that the AEC’s controlled DOE was intimately involved in genetics research, cancer virology, and biological weaponry. Their areas of special interest and expertise included aerosolizable germs such as anthrax and lethal flu-like ailments created by genetic engineering of previously benign microbes. By 1951, the U.S. Navy Biological Research Laboratory (NBRL), leading America’s quest for advanced biological weapons, gained the leadership of Erich Traub, Hitler’s

Fig. 10.7. Department of Energy Genetic, Viral, Chemical, and Radiologic Co-Carcinogenesis Studies, 1962-70s

INSTITUTION : ENERGY, DEPARTMENT OF (CP 6-0500)
 ADDRESS : BIOLOGY DIVISION
 OAK RIDGE NATIONAL LABORATORY
 P.O. BOX Y
 OAK RIDGE, TN, 37830
 TITLE : MCL-82DA VIRAL CARCINOGENESIS PROGRAM:
 HOST CELL CONTROL OF RETROVIRUS EXPRESSION
 PRINC INVEST : DR. H.W. TENNANT
 DR. FEN YANG
 PHONE : 615-483-8611
 PROJ OFFICER : DR. CHARLES J. SZERN, BLDG. 37, RM. 1B22, 496-6135
 CONTRACT SPEC: MR. THOMAS LEWIN, LONDON BLDG., RM. 4C09, 496-1781
 SECTION : RNA VIRUS STUDIES

INSTITUTION : ENERGY, DEPARTMENT OF (CP 7-0503)
 ADDRESS : DIV. OF BIOLOGICAL & ENVIRONMENTAL RES.
 OAK RIDGE NATIONAL LABORATORY
 P.O. BOX Y
 OAK RIDGE, TN, 37830
 TITLE : IN VITRO INTERACTION OF CHEMICAL CARCINOGENS WITH PRIMATE CELLS
 PRINC INVEST : DR. GEORGE C. LAVALLE
 PHONE : 615-483-8611
 PROJ OFFICER : DR. STAVEN E. THONICK, BLDG. 37, RM. 2C07, 496-4462
 CONTRACT SPEC: MR. JACQUE LABOVITZ, LONDON BLDG., RM. 4C09, 496-1781
 SECTION : COCARCINOGENESIS STUDIES

INSTITUTION : ENERGY, DEPARTMENT OF (CP 7-0504)
 ADDRESS : DIV. OF BIOLOGICAL & MEDICAL RES.
 ARGONNE NATIONAL LABORATORY
 9700 SOUTH CASS AVENUE
 ARGONNE, IL, 60489
 TITLE : IN VIVO RADIATION-ACTIVATION OF ENDOGENOUS SARCOMA
 VIRUS GADOMER
 PRINC INVEST : DR. EMMERSON W. CHAN
 DR. CHRISTOPHER A. REILLY
 PHONE : 312-739-7711
 PROJ OFFICER : DR. JOHN DAHLBERG, BLDG. 37, RM. 1C21, 496-1478
 CONTRACT SPEC: MR. JACQUE LABOVITZ, LONDON BLDG., RM. 4C09, 496-1781
 SECTION : COCARCINOGENESIS STUDIES

INSTITUTION : ENERGY, DEPARTMENT OF (CP 7-0510)
 ADDRESS : PREALIA CANCER RESEARCH INSTITUTE
 3023 SUNSHINE STREET
 OAKLAND, CA, 94609
 TITLE : HUMAN MAMMARY TUMOR VIROLOGY
 PRINC INVEST : DR. ADELINA J. SACKETT
 PHONE : 415-451-4900
 PROJ OFFICER : DR. JOHN DAHLBERG, BLDG. 37, RM. 1C21, 496-1478
 CONTRACT SPEC: MR. JACQUE LABOVITZ, LONDON BLDG., RM. 4C09, 496-1781
 SECTION : BREAST CANCER VIRUS STUDIES

INSTITUTION : ENVIRO CONTROL, INC (CP 6-1021)
 ADDRESS : 11300 MCCREYVILLE PIKE
 ROCKVILLE, MD, 20852
 TITLE : SWITCHING OF BIOHAZARD CONTAINMENT FACILITIES
 PRINC INVEST : DR. ROBERT M. MCKINNEY
 PHONE : 301-468-2500
 PROJ OFFICER : DR. ALFRED HELLER, BLDG. 41, RM. A108, 496-6758
 CONTRACT SPEC: MR. JAMES DOYLE, LONDON BLDG., RM. 4C09, 496-1781
 SECTION : PROGRAM RESOURCES & LOGISTICS

Energy Department cancer induction studies examining cofactors, including a suspicious focus on retroviral diseases like AIDS, as early as 1970. Additional research by Dr. Horowitz published in *Death in the Air: Globalism, Terrorism and Toxic Warfare* showed many similar NCI studies targeting minority and ethnic populations during the early 1970s. These were reminiscent of the eugenics movement and atrocious Nazi experiments. Source: NCI Staff. *Op cit.*, 1978, p. B-8.

top cancer virologist and bioweapons expert. Traub contributed greatly to Dr. Kissinger's cadre of ex-Nazi scientists who came to America during the CIA's top secret "Project Paperclip." Dr. Traub also brought his assistant Anne Burger to work for the Navy in close collaboration with the AEC.(Horowitz and Martin, 1998)

By the early 1960s, the NBRL's research also engaged the University of California. Collaborative Naval and U.of C. studies were directed by Dr. Alfred Hellman. His primary affiliation was with the AEC. Following AEC direction, he became chief of the "Biohazards Control and Containment Segment" of the NCI's Special Virus Cancer Program (SVCP). Among this organization's primary objectives was to identify the effects of "viral aerosols" on animals and humans. One grant objective was stated to "evaluate the effect of selected stress situations . . ." that induced immunological suppression, in addition to viral disease and/or cancerous trauma induction. The project also sought "to evaluate the role airborne [viral] particle size might play in such interactions."(Horowitz and Martin, 1998)

This NavyUniversity of California collaborative effort was additionally officiated by the NCI's "Solid Tumor Virus Segment" chairmen James T. Duff and Robert J. Huebner studying the genetic mechanisms and viral structures regulating many cancers.

Again, it should be emphasized that *viruses are essentially considered packets of genetic material* DNA or RNA. Following a decade of progress in this field, their 1971 SVCP report stated this proposed course of action: "Continue to develop cell reagents as substrates for human carcinogenesis; attempt to isolate and characterize viral agents from human tumor cells; continue a reference laboratory . . . of cells in culture; study oncogenic viral antigens during embryogenesis, and continue basic research in the biology of tumor viruses."

Fig. 10.8. Battelle and Argonne National Laboratory Collaborative DOE "Genomes to Life" Press Release



Genomes to Life

Massive Effort Promises Payoffs for Energy and the Environment

We have entered the era of "post-genomics." The first analyses of the working draft human genome sequence have been published. The next step, funded by the Department of Energy, is an ambitious 10-year program to achieve the most far-reaching of all biological goals: a fundamental, comprehensive, and systematic understanding of life. Applications of this level of knowledge will be extraordinary and may include energy, environmental remediation, and the protection of human health.

Oak Ridge National Laboratory (ORNL) and Pacific Northwest National Laboratory (PNNL), Department of Energy labs managed or co-managed by Battelle, have been selected to focus unique expertise and some of the most powerful analytical tools in the world on the initial three-year, \$23.4 million phase of DOE's Genomes to Life program.

Currently, scientists do not fully understand the size and diversity of all protein complexes (the molecular machines of life), some of which comprise dozens of components, nor do they know how many of these complexes exist at a given time—although the number is estimated to be in the thousands.

A new systems biology center anchored at both laboratories will develop novel technologies and the specialized analytical tools and methods required to examine live cells and isolate, identify, and characterize protein complexes within microbial cells. ORNL and PNNL are devising new approaches to isolate

protein complexes—an expensive and time-consuming process—in a robust, high-throughput fashion. The two Labs' powerful mass spectrometry-based techniques provide an unparalleled ability to identify and characterize these protein complexes, and researchers plan to automate the protein isolation and analysis process and incorporate computational tools to interpret, store, and disseminate data to the greater biological research community. Also named on the award to create the center are Argonne National Laboratory, Sandia National Laboratories, the University of North Carolina, and the University of Utah.

In addition to generating critical information that will revolutionize biological research, Genomes to Life may allow us to discover methods that nature has already devised to help solve problems in energy production, environmental cleanup, and carbon cycling.

Payoffs for the Nation

Within a Decade

Develop a technology base for cost-effective cleanup strategies

Improve work to extend carbon cycle and design strategies for environmental carbon capture

Improve biological systems of fuels and bioenergy

Long Term

Develop technology for carbon capture and storage

High-throughput screening carbon cycle to control global warming

Utilize DOE's energy research to develop novel fuels and bioenergy



A Battelle Memorial Institute news release heralding their "\$23.3 million phase" of the Department of Energy's "Genomes to Life" program. This announcement, issued in November, 2002, falsely insinuated, as propaganda might, no knowledge of the human genome's energetic functions in up-regulating biochemical and electrochemical processes. Source: BMI at <http://www.battelle.org/solutions/fall02/section9.pdf>

In summary, the British-controlled U.S. Atomic Energy Commission directed the DoE and the U.S. Navy's biological weapons officials to research, develop, and test genetically engineered viruses for airborne transmission of cancer and unprecedented lethal flues.

The “Genomes to Life Program”

As shown in figure 10.8, in November, 2002, the DOE contracted BMI to direct the “Genomes to Life Program.” BMI's press release stated, “We have entered the era of ‘post-genomics.’” The first analyses of the working draft human genome sequence have been published. The next step, funded by the Department of Energy, is an ambitious 10-year program to achieve the most far-reaching of all biological goals: a fundamental, comprehensive, and systematic understanding of life. Applications of this level of knowledge will be extraordinary and *may include energy*, environmental remediation, and the protection of human health.” [Emphasis added.]

Notice the phrase used—“may include energy.” As though scientists are currently unfamiliar with any relationship between genetics, liquid crystal protein science, and electrogenetic bio-regulation. This alone evidences the absolutely ludicrous propagandist nature of official government handling of genomes for life. In fact, given the wide ranging, frequently lethal, nature of DoE experiments, including nuclear tests on military and civilian populations coupled with cancer experiments like those documented in figure 10.7, this collaborative undertaking might better be titled “Genomes for Death Program.”

The Oak Ridge National Laboratory (ORNL) and Pacific Northwest National Laboratory (PNNL), along with Department of Energy's labs were managed, or co-managed, by Battelle, their press release stated. These institutions had “been selected to focus unique expertise and some of the most powerful analytical tools in the world on the initial three year, \$23.4 million phase of DOE's Genomes to Life Program.

The propaganda continued, “Currently, scientists do not fully understand the size and diversity of all protein complexes (the molecular machines of life), some of which comprise dozens of components, nor do they know how many of these complexes exist at a given time— although the number is estimated to be in the thousands. A new systems biology center anchored at both laboratories will develop novel technologies and the specialized analytical and computational tools and methods required to examine live cells and isolate, identify, and characterize protein complexes within microbial cells. ORNL and PNNL are devising new approaches to isolate protein complexes—an expensive and time-consuming process—in a robust, high throughput fashion. The two Labs’ powerful mass spectrometry-based techniques provide an unparalleled ability to identify and characterize these protein complexes; and researchers plan to automate the protein isolation and analysis process and incorporate computational tools to interpret, store, and disseminate data to the greater biological research community.

“Also named on the award to create the center are Argonne National Laboratory, Sandia National Laboratories, the University of North Carolina, and the University of Utah. In addition to generating critical information that will revolutionize biological research, Genomes to Life may allow us to discover methods that nature has already devised to help solve problems in energy production, environmental cleanup, and carbon cycling.”(BMI, 2002)

Bright Future for Genetaceuticals and Personal Identification

“According to technology experts at Battelle, . . . the ten most successful technology-based products developed by the year 2006” will be, number one, *Genetaceuticals*. “The next ten years will bring us some amazing products that will change our lives forever,” said Battelle Technology Intelligence Program

Manager Stephen M. Millett, who led the study. “Generally, many of these new products will personalize technology and bring all of us much closer to the information and services we need from day to day.”

Genetaceuticals, that is, genetics-based medical treatments, “will cure or mitigate the effects of various human diseases and disorders,” the BMI propaganda continued. Prospective uses included “*pharmaceutical treatments* for osteoporosis, MS, cystic fibrosis, Lou Gehrig’s disease (ALS), and Alzheimer’s.” [Emphasis added; notice they did not say “pharmaceutical cures.”]

“Within the next decade, we foresee treatments for MS, ALS, or even AIDS derived from work going on today in genetic research,” Millett said. “Watch for a boom over the next ten years in the pharmaceutical industry—primarily from genetic research. This is a golden age for the biological sciences.” (BMI, 1996)

BMI’s 2003 ten year forecast of top 10 products held genetic technologies, again, in first place. Their updated predictions stated, number one: “Mapping of the human genome for genetic-based personal identification and diagnostics” will be actualized. Researchers will look for ways to treat diseases before they occur. For example, if a person carries the gene that gives them a 90-percent probability of contracting Lou Gehrig’s disease, treatment could start in hopes of staving off the disease. Genome mapping also could lead to cures for specific cancers.”

The most successful genome mapping computers used throughout the biotech industry were also, largely, BMI’s innovations. Their March 7, 2000 news release heralded the formation of yet another “spin off company focusing on the cutting-edge of data mining and visualization software.” The new company, OmniViz, Inc. was said to be collaborating with Johnson & Johnson in conducting “pharmaceutical research.”

“In emphasizing the market need for solutions” provided by the Battelle “spin off,” Bob Quinn, VP for Battelle’s Chemical Products Market Sector, added, “Thanks to the Human Genome

Fig. 10.9. Leader of the West Nile Virus Vaccine Charade Dr. Thomas Monath, VP for OraVax Company



Dr. Thomas Monath, vice president of research and medical affairs for OraVax, is reported to be "confident that a vaccine for West Nile Virus can be found." Photo: Mass High Tech, Nov. 9, 2003.

Dr. Thomas Monath, Vice President of Oravax/Acambis, purchased by the MerckHoechstAventis Group, along with Dr. J. Craig Venter, secretly "stood to gain financially from the decision" made by the Clinton and Bush administrations to stockpile anthrax and smallpox vaccines. This was revealed by the *New York Times*.⁽²⁾

Monath joined Dr. Venter, an expert in DNA analysis and TIGR Director, in arguing for large federal purchases of anthrax and smallpox vaccine for "preparedness," during a White House meeting in April, 1998. Dr. Venter also urged additional funding be granted to his company's rapidly advancing DNA sequencing technology developed in collaboration with BMI contractors. He argued, in 1998, that these DNA decoding developments might make traditional biological warfare and vaccinations obsolete. Today, he continues to defraud the public.

According to veterinarian and health science journalist Patricia Doyle, in March, 1998, Dr. Monath's company OraVax corporation, the sole maker of West Nile virus (WNV) vaccine, was facing bankruptcy and was about to be delisted from the NASDAQ. A few weeks later, in April, the infamous White House meeting took place,

Fig. 10.9. Dr. Thomas Monath continued...

which financially saved his company.

"That same month," Canadian journalist Will Thomas reported, "OraVax was rescued from insolvency by a \$343 million contract from the CDC for smallpox vaccine . . . The company later received \$1.8 million from the National Institute of Allergy and Infectious Diseases for a vaccine against dengue fever—a tropical 'break bone fever' that has now migrated into the southern United States."

Dr. Doyle also copied *Federal Register* records that showed on March 22, 1996, the Peptide Therapeutics Corporation began developing a vaccine for the prevention of WNV-related Japanese encephalitis using its ChimeriVax technology. These findings were also relayed in the *London Financial Times* on August 1, 2000. Here, Peptide Therapeutics was reported to be a "UK biotech company" awarded "a \$3,000,000 grant to develop a new vaccine to combat the mosquito-borne West Nile Virus. . . . The vaccine [was] . . . developed at OraVax, Peptide's U.S. subsidiary, using the company's proprietary ChimeriVax technology." The article also credited the V.P of Oravax, Dr. Thomas Monath, for having worked "behind the scenes with Mayor Guiliani, former [NYC and current national] OEM [Office of Emergency Management] chief Jerry Hauer, . . . [and] the CDC since the very beginning of this issue."

The year Peptide Therapeutics began developing a WNV vaccine, Dr. Monath's Oravax Corporation was granted a license by the U.S. Army biowarfare lab at Ft. Detrick to manufacture a similar "Japanese encephalitis vaccine derived from a genetically-altered virus" the Army had created. The WNV was simply a variation of Japanese encephalitis, Dr. Doyle learned.

Quite suspiciously, "field tests began in the fall of 1999—the same time the WNV encephalitis broke out in Queens and spread throughout New York City," Will Thomas reported.

Then, on August 1, 2000 OraVax was awarded a \$3 million contract from the NIH to "fast track" its research and development of the encephalitis vaccine that they had initially developed in 1996!⁵

Robert Lederman, a political investigator based in New York, reported that Dr. Monath retired from Fort Detrick to become the Vice President of Research & Medical Affairs of the Peptide Company synchronously advising New York City's Mayor Guiliani to begin pesticide spraying operations to combat the WNV "crisis" that was said to have killed seven people following its initial outbreak in 1999.

Fig. 10.9. West Nile Virus Charade Continued...

Dr. Doyle suspected that the WNV was deliberately deployed in New York City for at least two reasons: 1) to instigate "a bioterrorism preparedness drill," and 2) to create "a multimillion dollar market" for OraVax's Japanese Encephalitis (JE)/WNV vaccine.

Likewise, Mr. Lederman's article expertly fingered Dr. Monath. "Wow!" *Newsday* quoted the OraVax and Peptide official. "This is the biggest arbovirus story of the last 50 years." While most people "reacted to the news about West Nile virus appearing in New York City with either horror or yawning indifference," Lederman wrote, Dr. Monath became "exhilarated."³

Why did the Army choose Monath and his company to produce the only WNV vaccine? By unearthing suspicious, if not incriminating, connections between Dr. Monath and the highest-level politicians involved in this apparent charade, Lederman answered: Mayor Giuliani keeps referring to the CDC as the source of the order to massively spray NYC with toxic pesticides. Monath . . . according to *Newsday*, has been closely advising the CDC and the Giuliani administration since the first day of the so-called NYC epidemic. . . .

Newsday sourced this later claim in September 1999. The article said that although epidemiologists suspected WNV had suddenly and inexplicably emerged in humans or animals in the Western Hemisphere, "the virus has for decades made its home in several U.S. research laboratories . . . including Rockefeller University in Manhattan and Yale University in New Haven, Connecticut. In fact, investigators there were the first to grow and study the WNV in the United States. The work began in the 1950s when unidentified viral samples from around the world arrived at Rockefeller University on a steady basis."⁹

Dr. Lederberg of Rockefeller University, also in attendance at the infamous April, 1998 White House meeting, was another key name on the West Nile and biowarfare front. He headed a 1994 Pentagon study on Gulf War illness which falsely concluded that no American service personnel in the Gulf had been exposed to biological warfare material. Dr. Lederberg headed the study while he was the Director of the American Type Culture Collection (ATCC) the organization that shipped the West Nile virus, along with numerous other potential bioweapons, to Iraq during the 1980s.

Dr. Monath, at the time of this writing, remains highly regarded in the biological weapons and vaccines industries.

Project and similar private initiatives, together with the tremendous advances being made in technologies such as gene expression arrays, chemical and life scientists are being inundated with data. . . . The winners will be those companies that can quickly transform raw data into sources of high value information—such as drug development targets and leads.”

Alternatively, if you consider the incredible advances in bio-electric diagnostic and therapeutic devices made during the past decade alone, this myopic focus on pharmaceutical research and development from genetic data, that is *genetaceuticals*, is grotesquely limited, if not morbidly irresponsible. Given the aforementioned corporate behavior in this sector, you might as well add *iatrogenically lethal* to this proposed course. Some more practical and promising alternative technologies are discussed in Chapter 12 of this book wherein electrogenetic and magnetic therapies are discussed.

The Institute for Genomic Research (TIGR)

Another BMI affiliated “winner” that competed for dominance during the rush to decipher the human genome was The Institute for Genomic Research, cutely acronymed TIGR. As discussed earlier, testimonies published in the U.S. *Congressional Record* linked BMI to the chief anthrax vaccine maker, Bioport Corporation, LLC, that relied heavily on TIGR to produce genetic analyses of the special strain(s) of anthrax used in their exclusive anthrax vaccine formula. The same was true for smallpox vaccine makers Baxter and Aventis (Oravax/Acambis). They also contracted with TIGR which apparently made use of BMI’s data crunching technology to spit out solutions to their biotechnology questions.

Not to be overlooked was BMI’s role in directing military and government purchases of these genetically engineered pharmaceuticals besides their involvement in the development of these innovations. The *Congressional Record* reported that BMI

directed the entire federal government's Joint Vaccine Acquisitions Program (JVAP). Again, the vaccine contracts for anthrax and smallpox vaccines alone were worth more than a half billion dollars to these few very privileged inside players, that is, private corporations.(Public Citizen, 2001)

The Institute for Genomic Research (TIGR) was shown centrally located between BMI and the anthrax vaccine maker Bioport Corporation in Dr. Horowitz's flow chart prepared for the FBI.

As mentioned, TIGR, the *New York Times* reported, was directed by the unscrupulous Dr. J. Craig Venter. Their report described him as a DNA industrialist and genetic scientist—the “Bill Gates of the human genome.”(Belkin, 1998) According to William Broad, Venter helped to privately form TIGR after the doctor resigned from the National Institutes of Health (NIH) in 1992. He then departed with his entire 30-person staff to work with the private for-profit TIGR. This group, along with affiliated officials, companies, and investors is the primary focus of this remaining Chapter 10. Let us now consider the despicable Human Genome Project “heist.”(Broad and Miller, 1998; Belkin, 1998; and Wade, 1999)

Introduction to the “Heist”

TIGR, like Bioport, LLC, could earnestly be called an Anglo-American venture. These two firms, along with BMI were apparently mutually reliant in working for the primary benefit of the BritishGerman oligarchy as you will increasingly learn.

TIGR was among the most obvious corporate suspects with economic and/or political motives to mail anthrax for military-industrial sabotage and windfall profiteering. Both TIGR and BMI were formed from the financial investments of leading European globalists and banking industrialists centered in London and Berlin.(BMI, 2001)

Far more insidious and deadly than the anthrax mailings was the work of Dr. J. Craig Venter and his affiliates in the world of

genomics. The anthrax mailings serial murders have left headline news. The British/German genetics/eugenics “heist” continues. What follows evidences a conspiracy to defraud the American public and U.S. Government out of billions of dollars of revenue from not only genetic patents and pharmaceutical licenses, but also from technological developments in the field of DNA research. These revelations, if popularized, might incite a global revolution focused on spiritual (i.e., energy) healing rather than disease induction through pharmaceutical poisonings.

Among the dire implications of suppressing this information is the advancing electrogenetic population control program. This political policy and positioned technology relies on genetic sequencing and identifiable frequencies to activate disease susceptibilities. Given the ageless battle between good versus evil, the forces of adversity seek unbridled power. The BMI/DOE “Genomes to Life Program” ultimately places unprecedented control over life, and premature electrogenetically-directed death, in the hands of a British-German cryptocracy least of all trustworthy. As you are about to learn, this European oligarchy historically engaged in war-making and genocides controls this technology and, barring Divine intervention, our planet’s genetic destiny is firmly in their grasp. Hardware and software for electrogenetic evolution, or more likely “devolution,” will apparently be directed from space by these global operatives under the guise of the “Strategic Defense Initiative,” or “Star Wars” program. This dangerous capability was alluded to by 2004 Democratic presidential contender Rep. Dennis Kucinich, in his House Bill 2977 (subsequently numbered 3616). (Horowitz, 2002)

British Links to Extreme Devil-Doing

As mentioned above, most of the evidence in the anthrax mailings case pointed to a British-based conspiracy involving BMI, Biopart, other vaccine makers, the Bush administration, and the CIA.

Wall Street Journal reporter EJ Epstein noted a peculiar American military policy of relying upon *British* intelligence and direction in everything having to do with the development and testing of powdered Ames anthrax. Even the bioweapon itself, according to Epstein's insiders, had returned from England following its initial mass production in Ames, Iowa. Epstein wrote that David Franz, director of the biological-research program at Fort Detrick (America's premier bioweapons facility) from 1987 to 1998, stated that whenever the Army wished to conduct "defensive" experiments on this anthrax strain, "it had to obtain the 'information' from a British military lab that did experiments with Ames anthrax in the powdered form. "Evidently," Epstein learned, "the virulent Ames strain had been sent from the U.S. to Britain, and, after the U.S. [allegedly] destroyed its stockpiles in the 1970s, samples had to be obtained from the British facility at Porton Down, specifically from the Center for Applied Microbiology and Research (CAMR). . . . So the matching sample traces not only to the U.S. but to Britain."(Epstein, 2001)

Along with numerous other investigators, Epstein reported that the security surrounding the British anthrax bacteria was "complicated by its privatization." Foreshadowing the privatization of DNA sequence patents by British-based individuals and corporations to be discussed shortly, the *Wall Street Journal* detailed that in 1993, "at the time it was supplying the virulent Ames strain sample, CAMR was privatized by the British government and became part of Porton Products Ltd. Porton Products, again, was owned by Speywood Holdings Ltd., which, in turn, was owned by I&F Holdings NV, a Netherlands Antilles corporate shell owned by Fuad El-Hibri, a Lebanese Arab living in Saudi Arabia with joint German-U.S. citizenship. His father, Ibrihim El-Hibri, joined other Saudi investors, including members of the bin Laden family, to develop Bioport's corporate parents. Besides financial and company records, more evidence for these connections included finding Bioport's administrative paperwork among the possessions of cave-dwelling Afghan troops

reportedly connected to Osama bin Laden.(Epstein, 2001)

You may recall that prior to his taking over this biotech company, and before Fuad El-Hibri took over Speywood Holdings Ltd., Porton Products, and later Bioport, he had worked in the mergers-and-acquisitions department of Citibank—a Rockefeller family-controlled bank in Jedda, Saudi Arabia. There, El-Hibri specialized in arranging investments for large Saudi investors, some of whom were Osama bin Laden’s relatives.

As director of Speywood Holdings, Porton Products, and later Bioport, El-Hibri operated on behalf of the company’s largest investors representing the highest levels of the British oligarchy. This factor, along with this Netherlands Antilles corporate shell, additionally linked El-Hibri’s financial planners, benefactors, and beneficiaries, to the same corporate structuring developed on behalf of TIGR shadow governor, George Soros. Yes, indeed, you read that name correctly.

George Soros, pictured alongside David Rockefeller in figure 10.10, is the man most credited for having engineered the great Asian economic recession of the 1990s. He directs Quantum Fund NV—the world’s highest return investment fund. Participation in the fund is limited to only 99 investors—the cream of the Europe’s oligarchy. Like the I&F Holdings NV, corporate shell, Soros’s Quantum Fund NV was likewise incorporated in the Caribbean’s Netherlands Antilles in order to circumvent U.S. government jurisdiction and taxation. According to the Task Force on Money Laundering of the Organization for Economic Cooperation and Development (OECD) the Netherlands Antilles has repeatedly been cited among the world’s leading centers for laundering illegal currency derived from cocaine and other drug dealings. Soros’s Quantum Fund NV, like El-Hibri’s corporate entities, represents mainly British royalty and European aristocratic interests.(*Executive Intelligence Report*, 1996)

In his *Wall Street Journal* report, Epstein wrote, “Saudi Arabia was interested in obtaining an anthrax vaccine to counter Saddam Hussein’s biological warfare capabilities,” and turned

Fig. 10.10. George Soros, Money Manager for the Oligarch



Photograph from the Carnegie Corporation of New York featuring, from left to right in the back: Ted Turner, Bill Gates, Sr.; George Soros, David Rockefeller, and in the front: Irene Diamond, Leonore Annenberg, Brooke Astor Photo: <http://www.carnegie.org/sub/awardees/art/tt.bg.gs.dr.jpg>.

The photo shows the 2001 Carnegie Medal of Philanthropic Award-ees including: the Gates family, the Rockefeller family, George Soros and Ted Turner. The Gates family was recognized for "their landmark efforts to promote health equity around the globe," by donating more than \$200 million for Third World vaccination a "public health" practice linked to AIDS's origin and other "iatrogenocides."

"The Rockefeller family was recognized for its exceptional record of philanthropy over the last century," stated the Carnegie Corporation. Carnegie and Rockefeller family members played primary roles in initiating the eugenics/racial hygiene movement of the 20th Century.

George Soros, their propaganda stated, spent "nearly a half-billion dollars each year to support projects in education, public health, civil society development and other areas . . . [H]is leadership and vision in fostering open societies and a better life for billions of citizens of the world," was acknowledged by the award.

Ted Turner "was selected for his leadership in the philanthropic arena, particularly with his historic \$1 billion gift to the United Na-

Continued on next page.

Fig. 10.10. George Soros, Money Manager Continued...

tions, for his passionate stewardship of the environment, and for the Nuclear Threat Initiative to reduce the global threat posed by nuclear and biological weapons." Curiously, Turner stands farthest removed from David Rockefeller who is responsible for advancing, more than anyone else on the planet, the global nuclear weapons threat.

George Soros, the Carnegie award called, "A maverick capitalist and intellectual. A visionary, a great American and a great citizen of the world." It further acknowledged him as "a native son of Hungary and survivor of the Nazi occupation, . . . you have championed the cause of learning and education as a way of ensuring that human beings, no matter where they are born or the struggles they must endure, have a chance to create a life of hope, peace and security."

This is entirely misleading according to Australian journalist, Dr. Vera Butler. According to her investigation, Soros may have helped Hungarian fascists rob Jews during the war which forced him to flee Hungary in 1947. Independent investigators in America have reported, likewise, but worse. Soros's father is said to have helped Hitler's gestapo. Many believe that as a teenager, to secure survival, George was given false identification papers and helped Nazis who sought to loot Jewish estates. He later became a close associate of the Rothschild banking family, which *completely* explains, better than anything else, his rapid rise to financial superstardom. (Butler, 2002)

Soros, the billionaire trader, became "eastern Europe's uncrowned king and the prophet of 'the open society,'" wrote British reporter Neil Clark in London's *New Statesman*. "But open to what? . . . , the Man Who Broke the Bank of England, condemned the Bush administration's policies on Iraq as 'fundamentally wrong' - based as they were on a 'false ideology that US [military] might, gave it the right to impose its will on the world.'

"Wow! Has one of the world's richest men - the archetypal amoral capitalist who made billions out of the Far Eastern currency crash of 1997, and who last year was fined \$2m for insider trading by a court in France, seen the light in his old age?" asked Clark.

"Soros likes to portray himself as an outsider, . . . who stands detached from the US military-industrial complex. But take a [closer] look." His disturbing business associates include: Warren Zimmer-

Fig. 10.10. George Soros, Money Manager Continued...

man, "whose spell in Yugoslavia coincided with the breakup of that country." Paul Goble, director of communications at the CIA-created Radio Free Europe/Radio Liberty "which Soros also funds;" former national security advisers Zbigniew Brzezinski and Richard Allen, as well as General Wesley Clark, once NATO supreme allied commander for Europe; Stephen Solarz, once described as "the Israel lobby's chief legislative tactician on Capitol Hill," and a signatory, along with the likes of Richard Perle and Paul Wolfowitz, to a notorious letter to President Clinton in 1998 calling for a "comprehensive political and military strategy for bringing down Saddam and his regime."

"Take a look also at Soros's business partners" linked through their investments in Bioport to the anthrax mailings and bioterrorism in America . . . At the Carlyle Group, wherein he has invested more than \$100m, coinvestors and coconspirators include Former Secretary of State James Baker, and the erstwhile defense secretary [past CIA director], Frank Carlucci, George Bush Sr. and, until recently, the estranged relatives of Osama Bin Laden. Carlyle, one of the world's largest private equity funds, makes most of its money from its work as a defense contractor. Soros may not, as some have suggested, be a fully paid-up CIA agent. But that his companies and NGOs are closely wrapped up in US expansionism cannot be doubted." (Clark, 2003)

to Mr. El-Hibri who had taken over the British biotech lab and reorganized its bioterrorism defense business during the mid 1990s. El-Hibri then arranged deliveries of the anthrax vaccine for biodefense in Saudi Arabia.

In the months preceding the first Gulf War, George H.W. Bush administration was reported by Congress as having delivered numerous chemical and biological weapons to Saddam Hussein, including nineteen shipments of anthrax. This "trading with the enemy" was not unlike the Rothschilds' funding both sides of the Civil War; the Rockefellers partnership with IG Farben during WWII, and Prescott Bush laundering Fritz Theisen's Nazi steel industry profits. The *Executive Intelligence Report* observed that George Soros's founding financiers, and Europe's leading royal

banking family, the Rothschilds, were implicated in “the filthiest drugs-for-weapons secret intelligence operations. . . . [b]ecause it is connected to the highest levels of the British intelligence establishment.” The Rothschilds and Soros the report said, “managed to evade any prominent mention of its complicity in . . . the Bank of Credit and Commerce International (BCCI) . . . at the center of the scandal involving the international web of money-laundering banks used during the 1970s and 1980s by Britain’s MI-6 and the networks of Col. Oliver North and George H.W. Bush.

Recall also that Rockefeller University past president and ATCC Director Lederberg, among those promoting vaccine stockpiles to the Clinton and Bush administrations, also directed bioterrorism studies for the Council on Foreign Relations. Despite David Rockefeller’s leadership of this organization in recent decades, according to retired British Secret Service (MI-6) agent Dr. John Coleman, this politically influential, seemingly American, business council is controlled by the Executive Arm of the Royal Institute for International Affairs under the direction of the British oligarchy controlled “Committee of 300.”(Coleman, 1992)

In *Death in the Air: Globalism, Terrorism and Toxic Warfare*, Dr. Horowitz effectively exposed the greatest risk to humanity associated with these leading energy industrialists having control over the most advance genetic biotechnologies and DNA intelligence. It is sobering to consider the electromagnetic frequency generating capacities of HAARP, developed by ARCO under political control of Queen Elizabeth, II, its European counterpart EISCAT, and other “Star Wars” space-based weapons. Then consider the Royal Family’s influential, if not controlling, interests in BMI, TIGR, the London Trust, which along with the U.S. DoE oversaw the Human Genome Project, various global energy commissions beginning with the now defunct U.S. Atomic Energy Commission (AEC), the Genome to Life project administered by Battelle and the DoE, and other leading defense contractors with computer programs capable of actualizing the most advanced electrogenetic population controls.

It is very apparent that everything is in place for manipulating, coercing, enslaving, and even killing human beings with these advanced biospiritual warfare capabilities. The Strategic Defense “Star Wars” Initiative (SDI) described at length in *Death in the Air*, along with terrestrial frequency transmitters like HAARP and Europe’s counterpart, EISCAT; even cellular telephone networks and microwave towers operating unsuspectingly, advance potent population management potentials for global control.

The British-American Electro-Genetic Conspiracy

BMI’s website has glorified this organization for being instrumental to the U.S. Department of Energy’s research and developments. Their accolades include “climate control” (i.e., weather control) technologies such as the controversial method of heating the atmosphere in an era of global warming built, as mentioned previously, by the British Royal Family controlled ARCO energy consortium. HAARP’s affiliated website text, we stated, was copyrighted by Cold Spring Harbor Laboratories (CSH). (Horowitz and Puleo, 1999)

Now this threatening eugenics saga comes full circle. CSH, the focus of Chapter 4, has been home to the earliest Rockefeller and Royal Family instigated genetics/eugenics activities. Do you recall their joint logos prominently displayed in the New York Public library genetics exhibit shown in figure 4.7? Currently, CSH remains America’s leading Human Genome Project facility along with BMI and TIGR. These institutions tie British Royals to their banking families’ interests.

The March 16, 1999 issue of the *New York Times* identified the three member consortium charged with determining the fate of the “publicly financed” Human Genome Project (HGP). These sponsors of the allegedly “American-based” program were commissioned to lead efforts to determine the sequence of three billion DNA units held by every human cell. These HGP

directors included the NIH, the U.S. Department of Energy, and the Wellcome Trust of London (apparently associated with the Wellcome pharmaceutical consortium currently called GlaxoSmithKlineWellcome). This is not surprising given the pharmaceutical focus of their interests and this exposé. In short, based on the above information, these three members represented the vested interests of mainly the Rockefeller and Rothschild banking families of America and Europe respectively, and the Royal Families of Britain and Germany. (Wade, 1999)

Contrary to the CIA's propaganda relayed in figure 10.11, Dr. Venter at Celera did not simply tie up "government scientists" in efforts to map the human genome. On behalf of his European bosses, he actually pirated the entire project and pilfered its rewards.

The Human Genome Project Heist

In a landmark publication, *The Lancet*, (*Lancet* Editors, 2002); available for download at: <http://www.tetrahedron.org/pdf/tainted.pdf>), declared the practice of medicine as ethically and morally repugnant! They blamed the major healthcare profession's moral decay on rampant conflicting interests inherent in drug company-funded health science. The editors relayed several examples of this, including one involving the genetic biotechnology and vaccine development firm Genentech. They asked rhetorically, "Just how tainted has medicine become?" They answered, "Heavily, and damagingly so."

More importantly they asked whether doctors and scientific investigators had the "courage" to oppose pharmaceutical funding for research that has brought "the whole of medicine into disrepute." The answer is, very obviously, far too few.

Unfortunately, doctors, health scientists, and the public at large, do not adequately perceive the socioeconomic and political culture in which American, if not global, medicine has evolved. The "Pirates of the Sacred Spiral," Dr. J. Craig Venter and his

British affiliates at the helm of this heist, provide a poignant and disturbing example of the Lancet editors' concerns.

His 82-foot-long yacht is called "The Sorcerer." Appropriately named according to the Book of Revelation in which the great plagues of the End Times were created by those who "practiced sorcery and cast magic spells" deceiving and intoxicating the world's people. Most people do not know the root word of sorcery or sorcerer (additionally cited in The Book of Revelation associated with those who deceived the wealthiest men of all the nations) refers to the practice of "pharmacopeia" or drug therapies, according to *Strong's Concordance*.

Dr. J. Craig Venter's biography, according to *New York Times* reporter Lisa Belkin, reads like science fiction. The "Bill Gates of the human genome" sees the sequenced genome paving the way for revolutions in healthcare in drug delivery. "Drugs could be made to neutralize the genetic codes of infectious agents—HIV, tuberculosis, hepatitis—like a new program in a computer. Others could replace the disease-prone genes of humans—cancer, diabetes, heart disease—like new spark plugs in an automobile." (Belkin, 1998) This was the search for the "Holy Grail" in the scientific "book of Life" that Dr. Venter prescribed, according to Ms. Belkin.

Just as the "publicly funded" consortium neared completion of its decades old quest to tediously map the entire human genome, Dr. Venter, previously working on the same project for the NIH, summoned Dr. Francis S. Collins to a special meeting. Dr. Collins, the new director of the project for the National Human Genome Research Institute at the NIH, administered by the Department of Energy at a cost of \$3 billion annually in the U.S. alone, had not considered Dr. Venter a friend nor an ally, Ms. Belkin reported. Their meeting however, at Dulles International Airport, appeared to change that, at least for the moment and for public consumption. Few realized that corporate profiteering, and the subsequent privatization of genetic patents on behalf of Venter's European backers, was in the works.

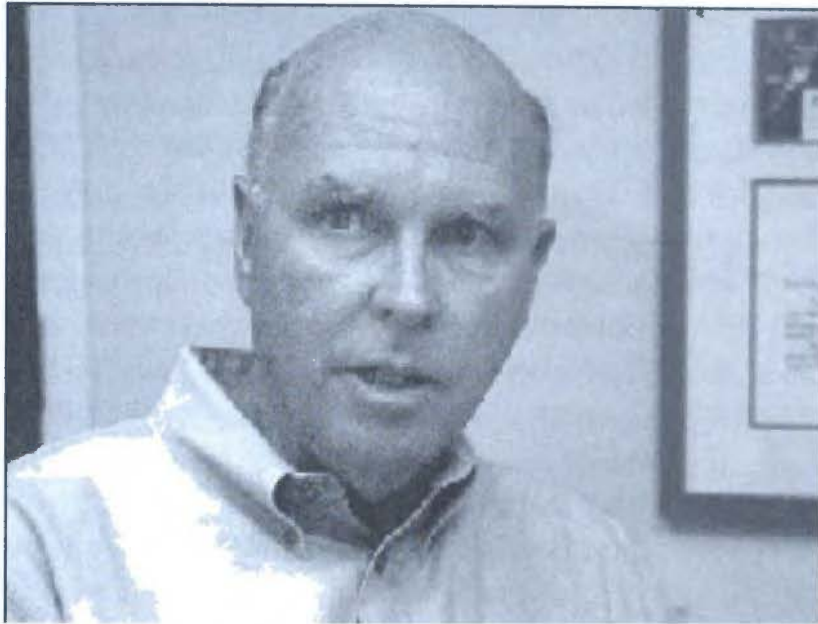
Venter informed Collins that his new corporate affiliates—Perkin-Elmer labs, a Celera acquisition directed by British boss, Mr. Tony White and Michael Hunkapiller, “Venter’s new business partners,” were poised to corner the gene patenting market using advanced technology that rapidly sequenced gene fragments (called “e.s.t.’s,” short for “expressed sequence tags”) rather than entire genes. “It is so fast and so automated,” Bilken wrote, “the new Venter-Perkin-Elmer labs will far exceed the total sequencing capacity of all the existing genomics labs in the world,” Dr. Collins was told. This new fortuitous company, named Celera Genomics, was set to “sequence the entire human genome, faster and cheaper than Collins and the NIH were planning to do—faster and cheaper than anyone had thought possible.”(Belkin, 1998)

The NIH director was allegedly persuaded to tentatively endorse Venter’s proposal that their public and private genome investigations proceed jointly with all patent rights reverting to Celera Genomics, and their acquisition, Applied Biosystems, rather than to “publicly financed” agencies. American taxpayers and university investigators that had labored to advance the project for decades as blessings for generations to come were about to be criminally defrauded!

“Three days later,” as Belkin’s story went, “a still-stunned Collins agreed to appear at a joint news conference with Venter and several Perkin-Elmer officials.” The paperwork had apparently been signed and the ruse secured. As it turned out, Venter had been largely, if not entirely, bluffing, Belkin recorded. The hoax resulted in the precise outcome every major Human Genome Project private investor had desired. Celera officials, as well as the “publicly funded” organizational directors at the highest levels of the NIH, Energy Department, and Wellcome Trust of London, were all pleased. The heist, or “hoax” was worth billions!

Genetic patenting rights were then securely privatized by inside traders, or more accurately *insidious traitors*. The heist

**Fig. 10.11. Captain of the "Pirates of the Sacred Spiral:"
Craig Venter as Seen Through the Eye of AP and the CIA**



J. Craig Venter, credited by national propaganda mills for leading the effort to map the human genome, was photographed here in 2002. He was said to be working to create lab-born life on behalf of contemporary eugenicists including international bankers and BritishGerman elites.

According to the Associated Press (AP), credited for the above photo and following story, Dr. Venter is a hero. Dr. Horowitz, however, disagrees. He credited AP in previous works for being the "principle mouthpiece" for the Central Intelligence Agency (CIA). America's leading spy network was reported by *The Washington Post* to be overseeing all health science agencies in the U.S. Official documents claimed this was necessary in the interest of "national security."

The AP article broadcast by CBS News stated that "scientists are attempting to create a new form of life in the laboratory."

This claim is obvious propaganda since clones of genes, bacteria, viruses, rodents, dogs, cats, pigs, sheep, monkeys and possibly even humans have been

Fig. 10.11. Craig Venter continued..

manufactured in laboratories as has been reported in the scientific literature for years.

"Gene scientist, J. Craig Venter hopes to create a single-celled, partially man-made organism with the minimum number of genes necessary to sustain life," the AP report heralded. "If the plan works, the microscopic man-made cell will begin feeding and dividing to create a population of cells unlike any known to exist, . . ."

Shall we begin celebrating?

"The project could lay the scientific groundwork for a new generation of biological weapons," the article continued, "But Venter . . . said the project could also help in the enhancing the nation's ability to detect and counter existing biological weapons. The project, largely classified, advanced by BMI through their Genomes to Life program, is funded with a three-year grant of \$3 million from the Energy Department. The latter is effectively directed by the AEC on behalf of leading European globalists.

"We are wondering if we can come up with a molecular definition of life," Venter told the Post. "The goal is to fundamentally understand the components of the most basic living cell."

"The plan will begin with *Mycoplasma genitalium*, a tiny organism that lives in the genital tracts of people and may cause or contribute to an inflammation of the urethra."

In recent years, pathogenic *Mycoplasma* strains have been isolated from AIDS patients and patented by the U.S. Armed Forces Institute of Pathology. This viral/bacterial genetic recombinant has been widely regarded as underlying myriad emerging diseases including new forms of cancer, autoimmune diseases, and bizarre chronic and increasingly lethal "flu-like" illnesses.

"All genetic material will be removed from the organism," the AP article continued. "Scientists will synthe-

Fig. 10.11. Craig Venter continued..

an artificial string of genetic material, resembling a naturally occurring chromosome, that they hope will contain the minimum number of *M. genitalium* genes needed to sustain life.

"The artificial chromosome will then be inserted in the hollowed-out cell, where it will be tested for its ability to survive and reproduce...

Venter and Hamilton Smith, a Nobel laureate, founded Celera Genomics Corp., the Rockville, Md.-based company where researchers tied government scientists in deciphering the human genome two years ago," the propaganda stated.

Venter resigned from Celera this year and is financing several projects. One of them is the Institute for Biological Energy Alternatives, where the work on a new life form is to be carried out.

Source: Associated Press and CBS News. See. <http://www.cbsnews.com/stories/2002/11/21/tech/main530264.shtml>

mainly benefited the Anglo-American oligarchy and their business cohorts. It was the quintessential claim in the "biological gold rush." (Belkin, 1998; Pollack, 2002)

Belkin's story was obviously incomplete. After all, can you imagine that following almost twenty years of work on the Human Genome Project, and tens of billions of dollars spent on the publicly-funded program, the fate of these investments, the treasure of all genetic treasures, and almost all the glory, would be decided in three days behind closed doors by lone consideration of a rookie director at the NIH's National Human Genome Research Institute?

The answer is obvious. This was a \$3 billion annually funded project that fueled a giant federal bureaucracy involving thousands of researchers worldwide, all administered by the U.S. DoE. It is,

therefore, inconceivable that Dr. Francis Collins was entirely, or even mostly, responsible for falling for such a swindle. He did not solely make the monumental decision following one closed-door meeting with Dr. Venter at Dulles Airport? Never! This would be administratively, legally, and politically impossible. This was not the entire sad story or the whole tragic truth. The directions and approvals would have had to come from DoE officials and their governors—devil-doers within the AEC operating on behalf of their European benefactors.

Belkin reported, as though breaking bad news, what had been ongoing for almost a century in eugenic science. “In the years since the fight over the patenting of Venter’s e.s.t gene fragments,” she wrote, “the world of genomics has become increasingly privatized: in genetic research, private financing now outpaces public financing; the United States Patent and Trademark Office has issued more than 1,800 patents on full gene sequences, . . . Licenses on many of those human-gene patents have been granted to pharmaceutical companies. Amgen, for instance, paid Rockefeller University \$20 million to license a gene thought to regulate metabolism, with an agreement to pay many times that amount if the gene proves useful in treating obesity.”(Belkin, 1998)

This new private enterprise, Belkin wrote, stunned and angered the vast majority of scientists who had labored diligently for humanitarian, not economic, gain. “When all is said and done it will have been a great marketing coup for Perkin-Elmer,” said Randy Scott, president of Incyte Pharmaceuticals, a competing company. “That’s what this comes down to, great publicity.”(Belkin, 1998)

Dr. Venter later resigned abruptly from Celera under pressure from Mr. White, the chief executive officer of the Applera Corporation, Celera’s and Applied Biosystem’s parent. The later two are publicly traded, while Applera is privately owned. Mr. White, who spent 26 years working his way to chief executive

status at Baxter Corporation (which produced the smallpox vaccine along with Dr. Monath's Aventis/Acambus group), was notably more interested in business intelligence than social graces during a June 2000 Clinton White House ceremony. According to the *New York Times*, Norton D. Zinder, a Rockefeller University professor emeritus of genetics, and member of Celera's scientific advisory board, complained that Mr. White was more interested in checking his Palm Pilot for stock prices than attending to the "wonderful historic ceremony" in which his colleague Dr. Venter, was being honored.(Pollack, 2002)

Earlier, Pollack at the *New York Times* reported that Dr. Venter, as mentioned, sequenced both the anthrax genome on behalf of mainly BMI and Biopart, and the smallpox vaccine primarily for Baxter Corporation and the Hoechst-Merck-Aventis-Acambis/Oravax group. He also made potentially lethal biologicals while working at TIGR during the 1990s.(Pollack, 2001; Broad, 2001)

Mr. White left Baxter to lead the newly-formed, Perkin-Elmer. He arrived amid a shareholder rebellion, according to the *NYTimes*. "*An investor group led by George Soros had asked the board to break the company into pieces even before hiring a new chief executive.*"

Mr. White met with the investors and said it was too late to do anything about his hiring. "You ought to try to let me make some money for you," he said. And that's precisely what he did with the Human Genome Project heist.(Belkin, 1998)

Chapter 11.

Cloning Around With Life

by
Dr. Gary Tunsky and
Dr. Leonard Horowitz

“After silence, that which comes nearest
to expressing the inexpressible is music.”
Aldus Huxley

Cancer cells are not the only things with aberrant genetic material gone mad. Humans directing the genetic engineering and cloning industries appear to be likewise compromised. Viruses too, including many that have been man-made and engaged in carcinogenesis are mostly genetic materials wielding corruptive pathogenic power. The horrors of biological, chemical, and even thermonuclear warfare are primarily mediated through genetic expression by arguably mad men and women. As figure 10.7 showed, energy industrialists have known that chemical and nuclear/radiological exposures work synergistically to weaken human immunity predisposing victims to cancer virus infections and malignancies, yet they earn their livelihoods by plaguing people this way. Your body begins to decay most rapidly from these combined forces of death. Such exposures most often lead to slow, highly profitable, forms of genocide. You have watched your ailing friends and loved ones enter hospitals and long-term care facilities, consume ever increasing amounts of costly and toxic pharmaceuticals, only to succumb from such grand methods of “healthcare.” The side effects of hospitalization and medical professional care (i.e., prescribed drugs) now ranks high among the leading causes of death in the United States.

All of these weapons of mass destruction gain their lethality, don't forget, from the power granted DNA to direct or block your "life force." That's why, as explained in the last chapter, the Genomes to Life project directed by BMI on behalf of the DOE, and global energy industrialists, seeks to gain "the methods that nature has already devised" to produce and control energy. Energy is power! Those who wield both are engaged in the age old battle between good and evil.

Now that synthetic forces can control DNA, the power to direct all of life falls under the control of historically untrustworthy individuals, organizations, and corporations. Surely, these controlling forces are inherently less balanced and nurturing than the Creative Force that made us and has sustained life for eons.

If you have difficulty grasping the unprecedented global vulnerability relayed in this book you have obviously missed something. Reread the earlier chapters referring to the brilliant works of leading Nobel Prize winners in the field of genetics. The *primary* function of DNA lies in electromagnetic and bioacoustic communications within and between cells. Cymatics and protein science proves the profound effect of sound and light energies, bioacoustics and electromagnetic frequencies, on structural manifestations. Research and developments in this multidisciplinary field involve quantum physics, metaphysical spirituality, creationism, as well as the more mundane biological sciences. In this context, DNA is far more than a protein synthesis code—not simply a blueprint for life. Genes relay the power and energy to control *every* biological reaction and organic function. (Horowitz, 2000)

In the context of political power, the energetic aspects of DNA reconcile the seemingly disparate subjects addressed in Chapter 10—the anthrax mailings, the energy industry, and the global corporations and institutions that control virtually everything from bank transactions to space-based weapons. All of these, from genes to "Star Wars" involve energy technologies

and special financial interests. If history may judge, these “special interests” have not brought peace to earth, nor health to its inhabitants, but just the opposite.

Now you may be ready to take the next step in comprehending the ultimate risk about which we write. The information that follows provides a unique look into this dark world of highly specialized life control technologies and high finance. You may now see that the fields of genetic science, said to provide humanity’s greatest hope for surviving Twenty-first Century plagues, is a “Trojan horse” linked to the century old eugenics movement. Clearly, today’s Human Genome and Genomes to Life projects, directed by the world’s wealthiest war lords, are direct carry-overs from the “racial hygiene” initiatives of the early 1900s. Even the incriminated have not changed names. Spearheaded by political and economic notables, the above and following facts evidence what Dr. Horowitz has warned is nothing short of *bio-spiritual warfare*.(Horowitz, 2001)

Good Questions to Ask *Before* Cloning Human Beings

Whether you like it or not human cloning technologies have moved from science fiction to societal fact. Bioengineering has made its way into every corner of your life with potentially greater impact than any technology, ever.

As new technologies and new possibilities in genetic engineering have emerged at blinding speeds, it is critical to understand how to navigate this newly formed scientific terrain; to make informed political choices and personal decisions about some of the most profound risks and questions you and your loved ones will ever face. Decisions that will surely affect, and potentially alter forever, humanity.

Questions worthy of considering include: At what cost, financial and social, does genetic engineering and cloning technology come? Is there any risk to you as an individual—to your

health and well being from genetic engineering and cloning industries? Is there any viable rationale for genetic engineering if more advanced bioelectric and bioacoustic technologies can be developed and applied for everything from agricultural insect resistance, and plant growth stimulation, to healing illnesses and injuries. Should fertility clinics be given license to clone human beings?

The fact that rape and incest are crimes, might cloning reflect a similar disregard for human life? Its victims might think so. How might mother surrogates and cloned offspring be manipulated? Is a cloned embryonic manipulation, and its subsequent offspring, victims of science and the scientist who has prepared it for profit?

What about your rights to privacy? Should your identity be genetically transmitted to anyone who pays for this knowledge or has a desire to intervene in your life?

If every human being is composed of varying degrees of genetic errors, then against what ideal norm of vain perfection are you to be measured?

How differently will you live if your genetic “errors” are diagnosed? What might happen to your life and medical insurance policies? What might your employer think of your defect?

Then again, how tolerant would you be seeing your friends and close family members as defective, harboring mistakes and errors in their genetic codes?

What makes genetic sciences so subtly spine chilling is, like the eugenics movement, it posits a new archetype for humanity—an error-free, flawless, perfect organism without wrinkles, warts, blemishes, shyness, vulnerabilities, and frailties that have defined human uniqueness from the very beginning. Your assets and liabilities—including your imperfections are what makes you unique and likely attractive to your mate(s) or dates.

What are the potential consequences of embarking on a course of laboratory technological design of cloned drones with

the goal of perfecting the human race? Who will decide our perfect standards?

Besides political and medical implications of bioengineering and human cloning, what are the spiritual, philosophical, and religious implications of these applications of modern science? For example, are “genetic defects” really “mistakes” if one considers Eastern Karmic law and its Western equivalent, Divine judgement, with their unique tendency to redirect human social and spiritual development for the better?

More commonly asked, should miscarried fetal tissues be used by gene brokers to make millions? In other words, should life be used to create death as in the case of biological weapons of mass destruction being cloned in aborted fetal tissues?

Moreover, as pharmaceutical dependence has proven be an effective economic substitute for war,(Horowitz, 2001) what can we expect from the genetopharmaceutical revolution?

Should civilization stand idly by as a global oligarchy directs the world of genetic sciences to research, develop, and activate the most advanced population controlling weapons in history?

Current generations will be the last to have the freedom of life and health provided by a naturally evolving genetic code. This is especially obvious if you simply consider the myriad vaccines promulgated for “public health” that pollute humanity’s bloodstream with extraneous genetic material from bacteria, viruses, and other species in which vaccines are prepared. These undoubtedly enter the human genome potentially affecting generations to come.

If you find this hard to believe, this tragedy has already been documented. Unvaccinated children whose parents carry Simian Virus 40 (SV40) by receipt of polio vaccines prepared in contaminated monkey kidney tissues are chilling examples.(Butel, 1999) As retired federal vaccine analyst, Dr. W. John Martin, warned in *Emerging Viruses: AIDS & Ebola--Nature, Accident or Intentional?* this genetic mixing may, or may not, cause cancer

or some other illness in your lifetime, but may be expressed in your children, or even your children's children resulting in illness and/or premature death.(Horowitz and Martin, 1998)

Make no mistake, human genetic engineering proponents and activities have called the question of freedom versus slavery for humanity. The cryptocracy administering the nefarious political and economic agendas on behalf of the oligarchy, identified in earlier chapters of this book, has historically engineered and engaged the slave trades. Medical and genetopharmaceutical dependence for life and health is much the same. As dependence on genetically engineered goods is increasingly established, as has been seen in agriculture and medicine, prospects for economic freedom from the petrochemical-pharmaceutical cartel proportionately diminish. Is this not a form of human slavery? Thus, should you stand still, merely mesmerized, thus prospering the multinational corporations as they determine life's destiny.

One of the greatest mysteries of all creation is being altered, some say for better, in laboratory test tubes and culture chambers. What unforeseen consequences to the human race may accrue, and for what perceived benefits? Does any individual, corporation, institution or political body have the right to risk the planet's genetic destiny in this way?

Genetic engineering by definition alters the very foundation of life. Humanity could not possibly comprehend the full impact that this applied technology will have on future generations. Without this foreknowledge, how can informed decisions be made? And if they cannot be, why are ignorant decisions being tolerated?

Unrealistic Expectations

Most Americans barely understand the social and political implications of “mapping” the human genome whereby geneticists can now rewrite the vocabulary of life. Reflecting on the truth about DNA, what it really is--how it really serves as energetic antennae for the Life Force of Creation--the ignorant currently believe lies that genetic tests and therapies promise wholesale cures. Where is the scientific evidence for this? Soberly lacking.

The truth is, all genetic engineering and gene therapy is experimental and hazard-ridden. A growing list of organic and environmental casualties speaks for this imperfect eugenics practice and guinea pig science.

Based on the evidence relayed in the previous chapters, the idea that scientists can simply “map” the complex human genome and derive medical utopia is ridiculous. Especially when you understand the *incredible complexity* of electrogenetics and life. Each cell of more than 75 trillion cells in your body communicates with all others simultaneously like a wireless, fiber optic phone network in four different languages. Is this level of biological complexity really amenable to medical manipulations? Look at it this way:

The Human Genome, with three billion letters, forms the Holy Grail of biology. For a storybook metaphor, consider six billion bits of information in 23 chromosomes or 23 chapters in your organic book of life. Each chapter contains several thousand stories (30,000--40,000) called genes. Each story is composed of paragraphs, called exons, which are interrupted by subtitles called introns. Each paragraph is made up of words, called codons. Each word is written in the letters A,T,G, and C. (i.e., DNA's genetic alphabet) called amino acid base pairs. These base pairs pair up with one another (A pairs with T) (G pairs with C) to form the twisted ladder-like double helix. This makes you unique. (Genome Ridley 2000)

There are approximately one billion words in your story-book, which is equivalent to 800 Bibles. To put this into better perspective, if you read the genome as a bedtime story at the rate of one word per second for eight hours a day, it would take you a century to finish your book. It is absolutely mind-boggling that this genetic book of life fits inside the microscopic nucleus of a cell that fits easily on the head of a pin.

And biotech evangelists want you to believe they have a definitive handle on this, and can effectively manipulate this, without even diagnosing the electromagnetics and bioacoustics of the genome's origin. What a crock!

Want more proof of the ruse? Not long ago scientists agreed that approximately 100,000 genes were required to direct a human's life, with another 1,000 genes, or so, existing in certain altered forms associated with specific disease conditions. There is, thus, only economic cause to celebrate the completion of the Human Genome Project which found only about 30,000 genes.

The fact is, genes alone have nothing to do with inspiring life. They operate in partnership with other natural miracles and environmental factors. Almost everything in your body, from hair to hormones, is either made of proteins or made by proteins. Every protein is like a translating gene. Your body's chemical reactions are catalyzed, or sped up, by special proteins known as enzymes. Without living foods from plant sources, proper hydration, oxygen saturation, photon lights, and phonon sounds, enzyme reactions are severely impaired.

So what does a 74% risk of getting colon cancer from a certain gene really mean? Very little scientifically, other than the message is a great nocebo—opposite to placebo—in bringing on a catastrophic cancer psychosomatically and/or behaviorally. Indeed, this edict of genetic risk carries with it certain psychosocial liabilities. Much like being diagnosed with AIDS. How might this affect your life, family, career, economics, and life insurance even if the diagnosis is a mistake!

More important than your genetic code, or genotype, is your phenotype the resulting physical expression of genetic activity that is mostly determined by exposures to other things including: stress, diet, cellular immunity, free-radical assaults on your DNA, behavioral factors such as beliefs, attitudes, thoughts and emotions, toxic vocabulary, and physical factors including history of infections, injuries, inflammations, pH, dehydration, and toxicity levels, etc.

Thus, genes typically do not, alone, give rise to diseases like you are persuaded by the media and genetic missionaries to believe. In most cases, diseases result from degraded lifestyles. These alter the way genes are expressed in a *phenotype* that medical science calls disease. In other words, genetic expression depends on lifestyle variables like diet, stress, alcohol consumption, cigarette addiction, and sedentary living, more than amino acid sequences.

Imagine spending as much money as is spent by the biotechnology industry to further enslave humanity, alternatively to empower *you* to take better care of yourself. You might then learn to control your genetic expressions to forego illnesses through preventive living. With little risks from this approach, what would your benefits be, as well as the benefits to society? This certainly warrants consideration.

Moreover, not all of your gene expressions are expressed at any one time. In fact, only a small portion of your genetic information is expressed at any given moment. A wide variety of genes express at different times during your life cycle; then turn off and go to sleep.

Some genes also code for more than one type of protein. Thus, one message may be translated under one set of circumstances, while another message under another set of circumstances. So geneticists would be hard pressed synchronizing with serendipity to express modified genes at the right time.

So, proposing gene therapy for illnesses and disease factors that are turned on and off due to numerous other lessor known (e.g., lifestyle) factors is *preposterous*!

The following sections debunk common genetic misconceptions in four overlapping fields. These include: cloning in general, animal transgenics for organ transplantation (i.e., xenotransplantation), gene therapy in medical practice, and the agricultural uses or abuses of genetic engineering.

Cloning Basics

The term “cloning” is defined as “production of a cell or organism with the same nuclear genome as another cell or organism.” The word “clone,” deriving from the Greek word “Klon . . . a twig or cutting,” was used by early botanist Herbert Weber to describe plants that were propagated vegetatively. (Tunsky, 2004)

There are two forms of cloning: therapeutic and reproductive. Therapeutic cloning typically refers to producing human stem cells, tissues, and organs. Skin grafts, for instance, can be cloned for burn victims. Reproductive cloning can be used to produce a human fetus. Many argue that both forms are recklessly unsafe.

Cloning is achieved by placing genetic material from a donor into a female’s egg which has had its nucleus removed. As a result, the cloned embryo is genetically identical to the initial donor.

The technique used for cloning humans and animals is much the same. It is called “nuclear transfer” or “nuclear transplantation” because of the involvement of transferring the nucleus containing the genetic material. With the application of an electrical charge, simulating the natural spiritual spark of conception, the stimulated egg metamorphoses to an embryo. The fetus is then guided by nature’s bioacoustic and electromagnetic forces to become an identical life form from which the nucleus was taken.

Dolly: An Introduction to Human Cloning

Dr. Ian Wilmut is revered by many as a modern day Dr. Frankenstein. In 1997, the media reported his team's successful cloning of "Dolly" the sheep. The event was said to be the first time in history a laboratory-created fully developed life form was prepared from an adult body part. (Beardsley, 1997)

Dr. Wilmut and colleagues took a cell nucleus from a six-year-old ewe, and fashioned from it a perfect twin by using a process called "somatic cell nuclear transfer." He then transferred by injection the genetic code from the cell of the ewe into a enucleated sheep egg. Reminiscent of the early 1930s Hollywood feature, "Frankenstein," Wilmut then added the final touch by passing an electric charge through the composite cell to get it to split and divide. The resulting cloned embryo was implanted in the uterus of a surrogate sheep and the creature formed was named "Dolly."

This cloned sheep is living proof that an adult cell can be manipulated back to an embryonic stage and produce a whole new life. Since the birth of Dolly, the commercial prospect of cloning faces humanity.

Less known is the fact that Dolly had many siblings who didn't make it—they eventually died of "medical complications."

Dolly was said to be an extraordinary achievement. But it was long anticipated. Earliest efforts at cloning date back to Plato.

But soon, the practice of cloning will be so advanced that the Dolly event will seem passé.

Before this experiment, conventional wisdom held that a mammal could not be cloned from an adult cell. Unlike early stage embryo cells, which have undifferentiated cell types capable of becoming any cell in the body, adult cells are highly differentiated with many "switched off" genes.

So how do you trick the adult differentiated “switched off” cell’s DNA into reverting back to its undifferentiated “switched on” form?

Wilmot et. al., placed mammary cells in a culture and starved them of nutrients for several days. In this dormant state, few if any genes remained switched on. Then, the nucleus was extracted from the adult cells, placed beside the enucleated egg cells, and fused by electricity. The eggs were then able to reprogram the donor nuclei into behaving as if they had come from embryonic cells in the womb.

The technique that brought the two cloned sheep Megan and Moraq into existence in 1996 was the same technique used to clone Dolly a year later. From adult cells of nuclear transfer, Wilmot and his colleagues were able to grow a massive quantity of cloned cells to enable the production of legions of genetically identical transgenic animals. These were promised for use in human transplantation experiments among other things.(Beardsley, 1997)

In March of 2003, it was announced that two monkeys had, likewise, been cloned in Oregon. This brought humanity a step closer to human cloning which was said to have been accomplished by the Raelians—a cult claiming to have evolved from extraterrestrials.(CNN, 2002)

Media Persuasion for Cloning

It took Wilmot and his team 277 tries to finally clone Dolly the sheep and her offspring. What the media didn’t relay were the serious medical problems like severe immunosuppression, organ deformities, placental abnormalities and even death of the pregnant mothers. Should human parents assume such risks?

A bombardment of news headlines proclaiming the discovery of genes for seizures, insomnia, macular degeneration, obesity,

etc. has led the masses to believe they should warmly embrace genetic engineering and human cloning.

According to a 1992 Harris Poll, 43% of Americans said they would approve the use of gene therapy to improve their baby's physical characteristics, perpetuating standards of perfection set by marketing teams catering to political, economic and cultural elites.

In a late 1999 ABC Nightline special on cloning, journalists predicted splicing traits from other species to design super human children. For instance, canine genes and genes taken from an owl were said to offer superior hearing and night vision, respectively.

Even if such manipulations were successful in the short term, their implications could be enormous for altering subsequent generations. Would a child with modified designer genes be able to have children with a mate who's DNA hadn't been similarly modified? What might the consequences be for this?

The truth is, most embryos die before a woman is even aware she is pregnant. Approximately 7 million eggs are stockpiled in her ovaries with the average female releasing only 400 eggs in a lifetime, most of which go "unused." This gives geneticists and cloning advocates an excuse to view nature as remarkably inefficient because of the millions of eggs and sperm cells that go to waste.

Advocates of inserting designer genes and artificial chromosomes into DNA claim that it would provide an option for parents who are at risk for passing on undesired genes to their offspring, and the ability to cure some difficult cases of infertility.

Americans already spend billions of dollars to improve their looks with cosmetic surgery. Millions of school children are pumped with Ritalin, Prozac and Valium as a quick fix solution for so called learning disabilities and "behavior disorders" that are more accurately termed "poisonings"—mostly mercury-in-

duced neurotoxicity—from vaccinations containing Thimerosal. Other environmental pollutants such as food-borne pesticides additionally contribute. Why not add genetic mutantism to the long growing list of man-made ailments “requiring” medical intervention.

The serious dangers involved in designer gene insertions to genetically cure or manufacture a child to order are little understood and less told by mainstream information outlets. Biologists are far from being able to predict how such manipulations will interact with cellular and systemic mechanisms expressed by multiple gene communication.

The phenol barbitol family of drugs, given for the purpose of sedation, have become a contributing factor in segregating children from “normal” classmates, under the guise of “special education.”

Hyperactivity and attention deficit disorders (ADDs) are said to be genetically based. From a teacher’s perspective, a child labeled with a genetic disorder might be construed as handicapped. Inferior supervision and low self-esteem often, with this label, produces downward learning spirals.

Popular discussions on human cloning have centered on the prospect of creating multiple Michael Jordans, Einsteins, musical geniuses, child prodigies or other notable figures. Supermodels and super athletes might be enticed to establish cloning careers, selling their cells to make multiple perfect clones for tomorrows’ parents. Think how attractive cloning might be for dictators who marvel at the idea of watching their clones grow up to serve militarily. Even now, cloned “superior” humans are being discussed by leaders in the armed forces.

Will you and your children be perfect enough in this brave new world? What roles in society would be delegated to your “inferior” children and their progeny?

Code Ethicist Daniel Callahan from the Hastings Center wrote “Behind the human horror at genetic defectiveness lurks

... an image of the perfect being. The very language of defect, abnormality, disease, and risk presupposes such an image, a kind of prototype of perfection.”

This path to genetic perfection is landscaped by concerted efforts to eliminate, in the words of the British Royal Prince Philip, “useless eaters” through abortion and euthanasia. Once cloned human embryos exist in laboratories, many justifiably fear the eugenic revolution will reignite. As biotech critic Jeremy Rifkin put it “the old eugenics was steeped in political ideology and motivated by fear and hate. The new eugenics is being spurred and manipulated by market forces and consumer desire.”(Rifkin, 2002)

Either humanity controls this technology today, or genetic science will control everyone tomorrow. The repeated lesson of history is, whenever possible whatever will be tried somewhere by someone, and if viable for good versus evil, will eventually be used destructively for profit and/or extra control. Most experts and scientists are opposed to this madness.

Obviously, the major, if not sole, benefit of the cloning movement, and biotechnology industry in general, is that it fuels an arguably false economy.(Horowitz, 1999; 2001) Magnifying genetic predisposition for diseases and the urgent need for organ transplants, scientists, geneticists, psychiatrists, behaviorists, and others are able to tap into billions of dollars of grant monies and industry contracts. Potential benefits for cloning are dangled before the public like a carrot on a stick. Promises include more food production in agriculture, cures for the incurable ailments such as Parkinson’s disease, strokes, AIDS, diabetes, numerous degenerative disorders and cystic fibrosis. Skin grafts for burn victims and xenotransplants for organ rejection. Genetically treated clones, we are promised, could be made from persons suffering or dying from DNA disorders. Healthy spare body parts may be developed, some assert; with no harm being done to the original person. Are you gullible enough to overlook the little mentioned risks of this movement?

Surrogate Mothers

Many women in poverty in lesser developed countries rent their wombs to carry and bear children for infertile affluent couples. Some people believe this reduces a sacred process and women to guinea pig biological factories to be exploited for economic gain, albeit appreciated and justified by the paying parents.

The surrogate is paid on one condition—she delivers an “acceptable product.” Surrogates often have little foreknowledge what they must undergo for the little money they will “earn”.

Women who donate their eggs must undergo uncomfortable, humiliating, and dangerous procedures like mixing and administering daily super ovulatory treatments by painful injections, risk infections, swollen ovaries, ovarian cysts, uterine bleeding and even cancer. They are forced to abstain from sexual intercourse for long periods of time. All this for less than \$500 per month.

Environmental Factors and Human Cloning

To throw another crowbar into the cloning equation, consider complex psychological traits. A simple smile sources from a host of diverse factors, from jaw shape and sense of humor, to emotional disposition at the time. Commercial fantasies about cloning Mother Theresa or Einstein are pathetic because of the complex interaction between genotypes and environments, including the spiritual environment which interacts with special inspirational “anointings” impressively demonstrated in these individuals by their works. At best geneticists can only increase the chances certain traits will be emulated. A musical gift, likewise, would not be brought out unless the child matures in a musical environment. If a person with musical capacity never had the opportunity to sing or play an instrument, the genes would remain dormant, unexpressed. The talent would remain undiscovered.

So genetic expression depends on complex interrelationships between interacting genes and the environment, thought process, verbal communication, toxic poisonings, pH, oxygen levels, nutrition, etc.(Tunsky, 2004)

The Mendelian mechanical deterministic view of genetics would have you believe your health characteristics are “hard-wired” and predetermined by your genes. Does this explain why America is one of the sickest nations on the planet? Are we so genetically inferior, or have we simply accepted sickening ways of life from the models and choices presented to us by marketing agents on behalf of entrepreneurs? Current research in genetics shows altered genetic expressions occur due to toxic assaults on the DNA, free-radical damage to genes, coupled with chaotic, disordered electromagnetic frequencies triggering cellular disorders through faulty DNA translation of cymatic language.

Diet, thought processes, stress factors, environmental and lifestyle risks, including exposures to toxic substances all work together to turn genes on or off. Whenever family members suffer from similar ailments, its easy though ignorant to blame “bad genes” for the “familial” problem. But phenotypic expression is not as simple as this.

Genetic expression affects your body and mind *indirectly* through your environment and experience. A gifted child who is athletic will likely gravitate toward sports activities, thus become more physically fit. Alternatively, a genetic academic capacity, or interest in reading or writing might lead to more intellectual pursuits and, thus, academic excellence.

Cloning for organ transplantation

In October of 1997, Dr. Jonathan Slack, a professor of developmental biology at Bath University reported in the *London Sunday Times* that he and his colleagues were able to manipulate certain genes in a frog embryo to suppress the development of

the tadpoles head, trunk, and tail. They produced, as a result, a live headless frog.(Associated Press, 1997)

Slack said that instead of growing an intact embryo, he could genetically reprogram the embryo to suppress growth in all parts of the body except certain wanted bits. He said this work heralded the growth of complete organs—human body parts from artificial glass wombs.

Using this method, cloned organs would not have a head or central nervous system, so technically it would not be a human being. This would circumvent legal restrictions and ethical concerns governing human embryo experimentation.

The queasiness that many people feel over this type of experimentation distills to this: The brightest scientists have not been able to create any body part with advanced cloning technologies. The feat of organ transplantation with required suppression of natural immunity has been surgically and biochemically accomplished, but not creation or even recreation of an organ from scratch.

What motivates a billion cell embryo with every cell containing the same original blueprint to manufacture a 100-trillion cell organism on its own, to differentiate into the specialized cells, tissues, body organs and organ systems required for a perfect life?

It's interesting to note that the embryonic cluster that forms at about two weeks following gestation, highly differentiates into a raspberry cluster consisting of approximately one billion cells before it decides to break up and start forming individual tissues and organs.

One embryonic cell breaks off the cluster to form the intestines, another cell travels the distance to form the spinal cord, another the heart, another the lungs until the final cell is put in place to complete the formation of the organs. Then, the genes signal that process to stop. The human genome is not the answer. As you will learn most clearly in the next chapter, these differentiation

processes are ignited by bioacoustic and electromagnetic signaling for holographic cymatic precipitations within the quantum energy field. This advanced understanding makes Dr. Slack's work seem antiquated, if not barbaric.

Xenotransplantation and its Consequences

The prospect of commercial cross-species organ transplantation (xenotransplantation) has created huge financial incentives for multinational drug and biotech companies. Novartis, Monsanto, Aventis, and their many subsidiaries that dominate the field, have already invested \$100 million in research, expecting billions in return revenue from transgenic pig parts and expensive anti-rejection drugs.(PBS, 1996)

Some 4,000 Americans die annually waiting for transplantable organs with another 60,000 Americans on transplant waiting lists. The profit potential of xenotransplantation, one industry source commissioned by Sandoz, a Novartis subsidiary and maker of anti-rejection drugs noted, was estimated to soar to \$6 billion by the year 2010.

To justify their work in this field, Sandoz claimed that they could breed "germfree pigs with human organs," allegedly similar in size to humans, and breed them quicker in pigs than other animals creating an unlimited supply of organs and cells on demand for needy patients whose organs are less likely to be rejected by the human body.(PBS, 1996)

Since 1906, 84 humans have received whole organs from goats, chimpanzees, baboons, and pigs with a majority dying from complications of rejection and infection that happens within hours or days of the operation.

It is farfetched to consider laboratory genetic modifications made to "humanized" pigs will be less likely rejected than organs obtained directly from humans. There are interspecies differences between pigs and humans in life span, blood type, hormonal

differences, coagulation time, heart rate, and response to disease. Scientists admit that current animal models are very limited in their ability to predict human functioning characteristics largely due to varied differences in basic physiology.

In the fall of 1999, an 18 year-old human died of jaundice, blood clotting, kidney and lung failure because animal experiments failed to predict the cascade of side effects that accompany xenotransplantation. When, for example, a pig heart is transplanted into a human, for instance, the heart stops beating and turns necrotic within 15 minutes.(Murray, 2001)

Therefore, what remaining justification for such experimentation is there worth the risks and costs to society?

Goran Klintmalin, a transplant surgeon at Baylor University Medical Center in Dallas, Texas, minimizes the risks. His clinical trail with whole pig organs—hearts and kidneys—requiring massive doses of anti-rejection immunosuppressive drugs are worth patients' risks. The transmission of deadly animal diseases to humans might also be considered since pigs carry a broad array of viruses, bacteria, protozoal and parasitic pathogens, as well as mad cow disease protein prions.

Can scientists involved in clinical xenotransplant trials be trusted? Many are in partnerships with biotech firms. Many seek fame and fortune. Recently, the *Washington Post* reported that scientists and drug companies withheld from U.S. National Institutes of Health documents regarding six deaths that occurred between 1998 and 1999 from gene therapy experiments.(Associated Press, 1999) Humanity can ill afford to place its genetic destiny in such fallible hands. Without stronger opposition against the development of dangerous biotechnologies like xenotransplantation, life on earth is seriously threatened.

Anti-cloning coalition

According to testimony before the U.S. Congress by Hessel Bouma III, a geneticist at Calvin college in Michigan, 98 percent of animal clones become disfigured in the *best* of experimental circumstances, and humans are *much more* complex. For this and many other reasons, the anti-cloning coalition--Americans to Ban Cloning (ABC)--was activated.(Bouma, 1997)

Embryo cloning, according to coalition spokespersons, will turn surrogates' eggs and wombs into commodities while compromising reproductive autonomy and their overall health while increasing risk of illnesses, injuries, and deaths. Fertility clinics boast pregnancy rate successes, not actual live birth rate successes. The media propaganda mill uses biased reporting and spin doctors' assessments to persuade couples, who might otherwise adopt children, to enter fertility clinics. Most coalition members believe such deceptive marketing methods must stop.

Politicians depend, to some extent, on popular votes. They are heavily persuaded by payoffs and public opinions. That is why it is important for you to contribute to media and political debate encouraging discussion of the risks of human cloning and genetic engineering. Your efforts in this way can bring much needed change and enforced consumer protections. Here, for instance, is a sample letter endorsed by many congressional legislators, that anti-cloning activists composed for your use:

As you [may] know, the U.S. Senate introduced legislation to ban the cloning of human embryos both for the purposes of medical experimentation and the birth of a human being. The U.S. House of Representatives passed a bill on July 31st, 2002 to prohibit human cloning by a margin of 265-162.

Unfortunately, up to now, the cloning issue has been presented too narrowly as just a debate between religion and science. There has been far too little emphasis on the profound public policy concerns regarding the creation of a market for women's eggs and the increasing commercialization and control of human life.

We believe that opposition to cloning human embryos and human beings transcends traditional right-left politics. Therefore, we are asking prominent intellectuals, public policy advocates and activists from both the social conservative and liberal left camps to join together in support of the enclosed statement in advance of the upcoming Senate debate on human cloning. We hope you will add your name to the statement.

We, the undersigned, support legislation to prohibit the cloning of human embryos for either medical experimentation or for giving birth to a human being. Although we may differ in our views regarding reproductive issues, we agree that a human embryo should not be cloned for the specific intention of using it as a "resource" for medical experimentation or for producing a baby. Moreover, we believe that the market for women's eggs that would be created by this research will provide unethical incentives for women to undergo health-threatening hormone treatment and surgery. We are also concerned about the increasing bio-industrialization of life by the scientific community and life science companies and shocked and dismayed that cloned human embryos have been patented and declared to be human "inventions". We oppose efforts to reduce human life and its various parts and processes to the status of mere research tools, manufactured products, commodities and utilities. We are also deeply troubled that at present there is no legal or ethical framework in place to regulate the accelerated commercial exploitation of this research. We are mindful of the tragic history of social eugenics movements in the first half of the 20th century, and are united in our opposition to any use of biotechnology for a commercial eugenics movement in the 21st century.(Carnell, 2002)

Gene Therapy

There are examples of recessive genes playing key roles in disease protection or illness induction. Cystic fibrosis is one case in which a recessive gene appears related to the disorder. Another recessive gene has been linked to protection against cholera. Sickle-cell recessive traits are said to protect against malaria, etc., etc.

However, the random and risky nature of gene splicing has been sadly hidden from the public. The mass mind believes that the first human gene therapy experiments were carried out with a high degree of medical precision. In fact, the best that genetic engineering has to offer is a random insertion of modified genes into a complex sequence of chromosomes.

With gene therapy, researchers cannot definitively predict where on a chromosome strand the modified gene might land, raising a hazardous possibility of inadvertently disrupting other genetic expressions and cellular functions.

After more than a decade of intense research, physicians and geneticists still cannot reliably replace genes for patients suffering from these simple single gene disorders said to be potentially amenable to gene therapy.

Inserting a modified gene into a single cell bacterium is one thing; placing a foreign gene into a human being with 100 trillion cells is another. What is disconcerting is that by changing a single DNA base pair among three billion letters comprising your genome many complications may arise, including many different single trait diseases, that coupled with environmental and lifestyle factors, could initiate disease processes.

Take for example Huntington's disease, which usually strikes in mid-life with uncontrollable jerking of the limbs, loss of balance, dementia, depression, and a slow death. If a particular triplet of ATGC based pair "letters" in the implicated gene repeats more than 35 times, instead of the typical 10 to 20 times, Huntington's disease is likely to result. With 39 repeats of the triplet

base pairs, the first signs of the illness appear, on average, when patients are in their mid 60s. With three additional repeats, onset arrives by age 40, and with another eight repeats, patients often descend into full-blown dementia by age 30.

A long list of single gene detect disorders includes Werner's syndrome, with its childhood aging symptoms, and cystic fibrosis with thick copious mucous secretions. Tay-Sachs disease brings early neural degeneration and death, and Lesch-Nyhan syndrome leads to self-mutilation and mental retardation.

The more common disorders involving larger genetic constellations of chromosomal interactions are much more difficult, if not impossible, to unravel with genetic engineering. The main reason being that messages from many genes are expressed differently at different times in response to different things. For example, the substances butyrate and hydroxyurea trigger the "off switch" on the gene for fetal hemoglobin production. After the birth of the child the genetic message for fetal hemoglobin production goes to sleep and is replaced by the wake up message of adult hemoglobin synthesis. (Bland, 1999) The fetal hemoglobin message is still on the genome, but it's simply turned off. So how do you gene-splice messages coming from environmental and dietary factors?

A single cell bacterium will absorb DNA rings called plasmids and adopt them as their own. With human beings composed of an estimated 100 trillion cells with 40,000 genes on the nucleotide ladder, it's easy to understand why you would need to insert a modified gene into every cell, or start with a single-celled embryo.

The mechanistic reductionistic approach to gene therapy overlooks the bioelectric and electrogenetic worlds of science. It sees genes largely as Lego building blocks to be pulled out or put in to life at will. Attempts to control creatures like linear commodities is dangerous if not absurd. Said another way, the fuel on which genetic science runs is largely ignorance.

According to Dr. Jeffrey Bland, a pioneer in “genetic nutrition,” research shows the foods and beverages you ingest containing energetically “intelligent nutrients” have the ability to communicate with your genes. These energetic communications are required to establish healthy cell production and intercellular network signaling to the organism. This mechanism also helps protect you from so-called genetic diseases.(Bland, 1999)

Dr. Bland is not saying that food changes your genes in any way. The genes you were born with remain intact, embedded in the nuclei of your cells. Food selection can change the way messages from your genes are expressed influencing, if not largely determining, your health and vitality. Poor food and beverage selections initiate negative messaging instigating disease outcomes. The dead, fried, refined, sugar laden, processed foods that are commonly ingested silence genetic messages that contribute to health and longevity. They awaken genetic messages that result in degenerative diseases and premature death.

There is rarely, if ever, a simple on-to-one autonomous relationship between a gene and expressed trait such as height, hair color, resistance to disease, etc. One gene may affect several different traits, and conversely, many separate genes may combine to produce one trait. Hence, if you change one or more of the genes, or alter a gene already present, you change the set of instructions for how life was Divinely designed to operate. The outcome is most frequently unpredictable and unnaturally undermining.

This simple genetic reductionist idea of genes as “master molecules” or “causal agents” has been replaced by a more sophisticated understanding through electrogenetics involving genes as integral parts of complex energy networks controlled, largely, by the individual and his/her environment, including the resonant forces of nature or spirit.

So how can you deactivate genes that predispose people to let's say criminal behavior when criminal mentality is not physical, it is emotional and spiritual? Environment with regard to psychological traits not a criminal would express the gene constellations that contribute to criminal behavior or even intelligence. Even if it is scientifically feasible to increase intelligence by artificially inserting a persons genome with an intelligence trait, how are you going to force the necessary discipline necessary to educationally stimulate the gene through studies, intense reading and research?

The chances of artificially fashioning a person effectively, in any of these complex ways, whether for enhanced intelligence, artistic expression, or personality, without harmful side effects, are slim to nil.

Cons, Risks, and Failures of Gene Therapy

The constant changing interactions of genes, experience, environmental forces, and spiritual factors can *never* be reduced to simple linear formulas. This is central to the awesome intelligence and mystery of life. The truth is, at the turn of the 21st century we have yet to gather enough information to do more than guess about the number of genes that make substantial contributions to any complex human trait.

Science is beginning to decipher complex relationships between genes, biophysiology, and human behavior. But this does not provide license to deceive people or place populations at risk.

It may be much easier, though less glamorous, to tackle the social, environmental, ecological, political, and economic issues—the roots of most health problems—than it is to create, or even recreate, life without further poisoning of our planet.

Forty years ago, most scientists thought DDT was safe and promising. Nuclear power was touted as the cleanest energy source on planet earth. With little to no long-term studies, and no comprehensive risk/benefit analyses, each of these “innova-

tions” brought unforeseen tragic consequences for which we are still paying.

In 1994, a genetically engineered bacterium developed to aid in production of ethanol, produced residues that rendered the land infertile causing new crops to grow three inches and fall over dead. This Starlink fiasco demonstrated the shoddiness of FDA regulation. Developers took ineffective precautions and few measures to assure safety and success. They released bioengineering contaminated corn injuring many.(Associated Press, 2001) There are numerous similar examples of this form of reckless irresponsibility.

Currently, there is no consensus within the scientific community for safety within the bioengineering sector. Yet, their “innovations” and new product releases continue.

Might there be ways of treating cancer and chronic conditions available without risking the entire population, or even placing patients at risk of negative side effects? Chemo, radiation, and genetic therapies insult whole organisms, their biochemistry, and the electrodynamics. Just as agribusinesses threaten the general environment and all life forms to destroy specific localized insects, how smart are these approaches to solving health problems; especially considering more cost effective, and far less risky, alternatives (advanced in the next chapter) are generally suppressed by multinational corporate chiefs for profitability and worse, for genocide?

Genetics Versus Lifestyle Factors

In 1997, the U.S. National Institute of Environmental Health Services launched a \$60 million Environmental Genome Project to study the relationship between genes and the environment. The program focused narrowly on the mapping of individual susceptibilities to chemical and environmental toxins in relation to their genetic makeup. Little to no consideration was paid to the apparent influence health behaviors have on genetic expression.

There is, in fact, good reason to consider geneticbehavioral relationships. Gerontologists have claimed that 75 percent of your health after age 40 depends on what you have done, through your *lifestyle*, to yourself and your genes. Much like this book advances, this school of science teaches genetic expression is mostly influenced by electrical signaling beyond the gene.

Everyone knows of a friend or family member who appears aged from heavy cigarette smoker or alcoholism. You notice a poor luster to their hair and skin, obesity, fluid retention, and a general loss of vitality. Are these physical expressions purely genetic? Certainly not. You probably know of obese people who overeat. Likewise, is their weight problem purely genetic? Chances are, no, but their obesity is being expressed genetically *because* of their addiction to food—a common lifestyle dilemma!

With genetic expression depending on habits and attitudes, these physical changes, or biomarkers, are warning signals reflecting “bad choices” versus “bad genes.” If ignored for many years, the symptoms of poor lifestyle decision-making often results in common chronic diseases, premature aging, and early death.

The good news is, it’s never too late to improve your genetic expression, and alter your phenotype, to improved your health, vitality, and longevity.

By engaging an exercise program, eating clean and live organic foods, drinking plenty of pure water (including clustered water), thinking and speaking positively; even using prayer, you can modify genetic expression to enhance your health and extend your life no matter what age you begin.

One triple cheeseburger with french fries may not make a difference in your genetic expression, but repeated offenses in this domain over the course of years can modify your phenotype.

If the cells do not receive enough structured (e.g., clustered) water, oxygen, pure nutrients from ideally organic foods, and

sunshine, the adverse cellular effects from such deprivations will alter genetic expressions to inhibit protein synthesis, in turn effecting metabolic function and the electromagnetic and bio-acoustic communications of billions of cells through the Sacred Spiral.

When people live long, productive, and healthy lives, they are said to be blessed with good genes. When someone is struck down in the prime of life by cancer or heart disease, bad genes are often blamed. But life and health depend on an intricate web of relationships, within the biological, psychological, social, environmental, and spiritual worlds.

Ian Stewart, the author of *Life's Other Secret*, claimed genes are not like engineered blueprints, they are more like recipes in a cookbook. The genes tell the body what nutrient ingredients to use, in what quantities, and in what order to synthesize proteins, peptides, hormones, ATP and neurotransmitters. But they do not provide a complete accurate plan for the outcome. They need a divine chef to do that; and the energetic intelligence to do the cooking.

Agricultural Applications of Genetic Engineering

Vandana Shiva, director of the Research Foundation for Science, Technology and Natural Resource Policy in India, painted an elaborate picture portraying the genetic engineering of plants using a gene gun weapon called the Bioblaster. This device that blasts gold beads from a barrel of a gun at 1,000 miles-per-hour. The golden bullets penetrate the nuclei of cells after blasting through thick cell walls, membranes, and the protein rich cytoplasm of plant cells in sterile petri dishes. They deliver information they have been coated with from newly cloned genes. This is done for various purposes such as enhancing growth, phenotypic expressions, or insect resistance. The information is thusly inserted randomly along the plant Chromosomes. Only a fraction of the cells survive this bombardment. Only one in a million

express the new genetic information correctly. But this lucky mutant, and deadly new technology that created it, is heralded as wonderful by science magazines, general news sources, and the U.S. Department of Agriculture.(USDA, 2002)

To engineer new traits in plants and animals, scientists commonly rely on single gene modifications. These typically compromise host (plant and animal) resistance to infections from insects and microbes. Meanwhile, the traditional varieties that contain hundreds of genes working in concert in myriad ways to ward off diseases are brought to extinction to make way for the new dominant transgenic “super plants.”

This approach to agriculture is reminiscent of the inane approach to public health through vaccinations. Beyond myriad risks to natural immunity and thwarted immune response mechanisms leading to new autoimmune diseases and other widespread plagues, the alleged “immunizations” undermine host resistance to the illnesses they are said to prevent. Chicken pox vaccination is a classic example. The vaccine, given for a generally mild illness that infers lifelong immunity in infected children with rare morbidity, prevents ongoing natural immunity and delays the risk of the disease to adulthood when graver risks and highest death rates are known to be associated with chicken pox.

The most commonly planted engineered crops are similarly flawed by general design. They are said to offer more tolerance or resistance against specific herbicides, or have built-in insecticides. Today, the only crops that have been genetically engineered to resist insects contain variants of the same gene, promoted as a “chemical” named “Bt”, short for *Bacillus thuringiensis*. The live bacteria manufacture insecticidal proteins. Molecular biologists isolated the bacterial gene responsible for making the natural insecticide; then modified the gene, and placed it into potatoes, cotton, corn and dozens of other crops. These engineered plants then synthesized the Bt insecticidal proteins reducing or eliminating the need for insecticide spraying, along with the expense

and imprecision of spraying. These benefits are widely touted to farmers, but the wide ranging toxicity and risks to humanity are rarely discussed. These include, according to legal disclosures, the formation and environmental distribution of chemicals “that are one or more of the following: highly acutely toxic, cholinesterase inhibitor, known/probable carcinogen, known groundwater pollutant or known reproductive or developmental toxicant” and likely an endocrine disrupter as well. (Pesticide Action Network, 2004)

These toxicity risks create other costly problems. Insect pests often develop resistance to Bt sooner than other creatures. According to laboratory experiments, several kinds of insects are already resistant to Bt toxins. Beneficial organisms like lacewings and ladybugs, are reportedly being poisoned to death from eating the insects contaminated by the Bt. One study showed that Bt was poisoning massive numbers of Monarch butterflies. Many died unexpectedly from eating milkweed dusted with the poisoned pollen from Bt corn crops. This study was partially refuted by industry advocates and government officials who sought to downplay the risks. (U.S. EPA, 1995). Still, many are concerned that genetically engineered corn containing Bt may be reaping ecological havoc. Risky for humans, these new edible bacterial proteins may prompt antigenic complexes to form when they enter the human bloodstream. These may induce allergies and/or auto immune reactions.

Termination of Germination

Another chilling example of largely unrecognized danger to the human race is “Terminator Technology.” Terminator seed technology (TST) involves the manipulation of crop seeds so that plants grown from these seeds will become infertile and nonproductive after a set number of generations, thus the name “terminator.”

Once these genetically modified terminator seeds are planted, and traditional competing natural alternatives are diminished or completely eliminated by multinational agribusinesses that routinely seek monopolies, farmers will be 100% dependent and forced to purchase genetically engineered seeds rather than harvesting their own.(Hundsorfer-Gansmann, 2002)

Genetic Patenting and Profiteering

The genetic constituents of life are rapidly being patented and turned into objects of commerce. This commercialization of life is largely veiled behind marketing campaigns promising to feed the hungry and cure the ailing.

On October 14, 1980, shortly after the Supreme Court paved a path to commercialize all forms of life. Genetech, chastised by the editors of the *Lancet* for conflicting interests in exploiting genetic science,(*Lancet* Editors, 2002) set off a buying stampede on Wall Street offering more than a million shares of stock at \$35 each. By the time the closing bell had rung, the first privately held genetic engineering biotech firm raised nearly \$36 million enhancing their net worth to \$532 million in a few hours. The most amazing part is they pulled this off without the introduction of a single product!

This ignited a mad rush on Wall Street for biotechnology stocks, and throughout the industry for biotech patents.

Genetic patents originated with the work of an Indian microbiologist, Ananda Chakrabarty. He applied to the U.S. Patents and Trademark Office (PTO) for a patent covering a genetically engineered microorganism specifically designed to engulf oil spills. The PTO initially ejected the patent request, but was forced by the Court of Customs and Patent Appeals to issue the patent. The justification for the court's decision was that the microorganism was like a reactant, reagent, and/or catalyst. This argument eventually led to patent approvals on all genetically en-

gineered multicellular organisms. Genes are regarded as simple inventions, much like machines.

William Tucker, Manager for Technology Transfer at DNA Plant Technology in Oakland, California reinforced this position, “Just because it’s biological and self-reproducing doesn’t, to me, make it any different from a piece of machinery that you manufacture from nuts, bolts, and screws.”

According to critics of this decision, the PTO has put the whole human race on a crash course with annihilation.

No reasonable person would admit that a geneticist who isolated the properties of hydrogen, oxygen, or palladium, then classified them with a new label to be privately patented, would deserve a 17-year exclusive patent right as his invention.

Solid proof that the PTO and Supreme Court are heavily influenced by the genetic industrialists cited earlier as commanding the genetics/eugenics industry, and overall political system, is the change of logic from previous patent rulings. These earlier rulings rejected claims of nature being inventions.

Previously, mandatory patent qualifications were as follows: 1) Proof that the object patented is novel. 2) Has a useful purpose. 3) *The object has never been made before*. Since when has a stem cell, or a breast gene, even a kidney, never been made before? When genomic companies identify genes, what have they made? If you found a piece of land or an underground oil source, does this entitle you to an invention patent?

Genetic engineering from preexisting cells, genes, and organs are modified discoveries of the Creator’s Creation, not human, invention. Life is freely given as a gift from the Architect that created everything. Patenting the Creator’s gifts is nonsensical, if not socially and ethically unjust.

Genetic Bioweapons

Despite their signing of the Geneva Accord outlawing biological weaponry, many governments claim the necessity of research and development for “defensive” biological warfare. All experts admit it is virtually impossible to distinguish between offensive biological weapons research and development versus defensive uses of these methods and materials.

With recombinant DNA technology, it is now possible to develop a nearly infinite variety of synthetic biological agents for germ warfare. (Horowitz, 1998)

In 1986, Douglas J. Feith, the Deputy Secretary of Defense, noted the near impossibility of defending against the new birth of genetically engineered bio-warfare agents. The same technicians and technologies used to make designer drugs also develop designer biologicals. New agents can be manufactured in hours while antidotes may take decades or more, or never be found. To gauge the magnitude of this problem, consider the billions of dollars spent and years of research with little to no success in developing counter attacks against agents like anthrax, AIDS, smallpox, West Nile virus, SARS, or mycoplasma.

Genetic Engineering: A Moral Dilemma

A major concern of ethicists and moralists who regard genetic engineering as questionable, if not “offensive,” is the issue of human autonomy versus Divine influence. Scientists commonly pride themselves for being objective in their analysis of hard cold data. The abstraction of a Creative or Holy Spiritual influence is simply rejected as “unscientific,” despite the accumulation of scientific evidence compiled in this book. When such human or “scientific” autonomy dominates the *culture*, the ruling elite—scientists largely representing financial and industrial interests, and government officials operating likewise, force this dominant, albeit biased, view on the public. This view influences social perspectives and *cultural* values.

According to Dr. Tunsky, “An autonomy-based approach holds no commitment to ethical standards, nor to justice, or to morals. . . . The Nuremberg Code resulted from “scientific” atrocities that were allowed to occur because ethical considerations were superseded by political expediences. Talking about designer children, and how parents will one day be able to insert modified genes to enhance intelligence, beauty, or athletic abilities in their newborns is scientifically daunting and gravely immoral as this industry engages in the wholesale trade of fetuses and human fetal tissues.”

Dr. Tunsky, a devout Christian, considers both human cloning and genetic engineering a dire challenge to the world. He wrote, “We must understand that the processes of conception, pregnancy, and birth are not mechanical stages. The physical body is a spiritual abode or “Holy Temple” for an energized soul. Informed choices concerning bioengineering are not being made by the public. They have not intelligently consented to the consequences of changing the biological codes of life. We lack the wisdom and knowledge to play Yah, yet science is rapidly advancing in this direction.”

“Human beings are not cosmic accidents, mere biological artifacts, nor accidental forms of life slightly higher than animals,” Dr. Tunsky continued. “Modern science has set the stage for the rise in abortion, infanticide, worldwide famine, euthanasia, genetic manipulation, and institutionalized genocide; all under the facade of social responsibility and personal autonomy.

“Autonomy justifications are deeply flawed, selfish, and extremely dangerous to society. The word autonomy comes from two Greek words *auto* (self) and *(nomos)* meaning law. In the context of ethics, “self law” or autonomy generates its own ethical standards, not absolute standards of right and wrong, good or evil.

“If homeostatic protective compensatory mechanisms did not buffer the critical aspects of our physiology from genetic muta-

tions only the occasional shuffle from the genetic deck would survive, breeding future mutant generations. Nature is obviously conservative in this regard—so far as integrating genetic alterations is concerned. We might learn from this healthy example.

“With the exceptions of outright errors like extra or broken Chromosomes and random pairings of deleterious gene variants, most children have well functioning genomes.

“While human self-design of hyper-intelligence, photographic memory, or blue eyes and blond hair might bring strong sex appeal, what will this mastery over the human genome reap as a consequence of laboratory manipulations?

The Creator gave us life and He ended it, says Job (1:21) I think that’s a lot safer for humanity, and more beneficial, than what the genetics industry is offering.”(Tunsky, 2004)

Judeo-Christian Views on Genetic Engineering and Cloning

According to orthodox Judaism and Christianity, genetic manipulation is a serious violation of nature’s order. The Holy Scriptures are very specific on this point. DNA manipulations are abominations and violations of Judeo-Christian laws which read:

“Ye shall keep my statutes. Thou shalt not let thy cattle gender with a diverse kind: thou shalt not sow thy field with mingled seed: neither shall a garment mingled of linen and woollen come upon thee.”(Leviticus 19:19)

“Thou shalt not sow thy vineyard with diverse seeds: lest the fruit of thy seed which thou has sown, and the fruit of thy vineyard be defiled. Thou shalt not wear a garment of diverse sorts, as of woollen and linen together.”(Deuteronomy 22:9-11)

According to the early history of the nation of Israel from the Book of Jasher (Joshua 10:13 and 2 Samuel 1:18), the following passage is very pertinent:

“And the sons of men in those days took from the cattle of the earth, the beasts of the field and the fowls of the air, and

taught the mixture of animals of one species with the other, in order therewith to provoke the Lord; and God saw the whole earth and it was corrupt, for all flesh had corrupted its ways upon earth, all men and all animals.”(Jasher 4:18)

A related passage from the Old Testament states: “And God looked upon the earth, and behold, it was corrupt: for all flesh had corrupted his way upon earth.”(Genesis 6:11-12)

Thus, it appears that modern genetic research is simply a reenactment of ancient history.

For this and other reasons, Dr. Tunsky has advanced a chilling theory involving the necessity of human cloning to deliver the prophesied Christian Antichrist—a concept which the international community might consider. In his words, “Every human being birthed from an earthly mother and father has a soul and spirit breathed into them by our Creator. This prevents the Adversary from having full power over anyone’s spirit and soul, including the Antichrist, *unless the life form is a clone, lacking the breathe of Divine anointing.*

“In the end times, the professed Antichrist is to present himself as the ultimate man, with divine wisdom and creative power, claiming to be God-incarnate, leader of a New World religion. The Antichrist will declare autonomy, promote self-worship, yet destroy all human beings that have been made, naturally, in the image of Yah.” Thus, Dr. Tunsky predicts, if the genetic engineering and human cloning movements are allowed to progress, human beings, “made in the image of Yah,” will be replaced by human clones. “Because a cloned human is devoid of a soul and spirit, it would be a perfect vehicle for a fallen angel to possess.”

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Chapter 12.

Electrodynamics of Natural Therapies: Advancing Theories and Practices in Restoring Health and Consciousness

by
Iona Miller, Alan Miller, Michael Hyson
and Leonard Horowitz

“For you created my inmost being; you knit me together in my mother’s womb. I praise you because I am fearfully and wonderfully made; wonderful are your works. My frame was not hidden from you when I was made in the secret place. When I was woven together in the depths of the earth, your eyes saw my unformed body. All the days ordained for me were written in your book before one of them came to be.”

King David (Psalm 139:13-16)

Profound advances in the healing arts and sciences, both in diagnosis and treatment, are assured by the knowledge in this text. Sound and electromagnetic fields alter genetic expression and water structuring—goals central to DNA’s broadcast of what amounts to love songs from a universal orchestra. Whether you wish to acknowledge the Grand Composer/Master Conductor of this symphony, or not, you still get to enjoy the concert.

We now know that certain electromagnetic and bioacoustic frequencies can be turned on to trigger or suppress genes. We have seen how such genetic expression is bioelectrically mediated, virtually instantaneously, through liquid protein crystal matrices within and beyond cells to tissues, organs, and entire organisms. We now recognize that creationistic theories and spir-

itual healing practices previously belittled as “pseudoscience” and “quackery” are now firmly supported by hard science. The structuring and reshaping of matter through sound frequencies and energized particles and waves in quantum space vibrate our sacred geometric forms into physical realities. From these electrified matrices flow the ultrasonic echoes of wild dolphins to the most sophisticated imaging technologies. Life forms are affected bioacoustically and electromagnetically prompting even miraculous healings. This chapter explores this good news—largely overlooked domains. It takes you one step further in recognizing yourself as a spiritual being, fundamentally precipitated by scalar and electromagnetic energies which materialize your form as a divine, albeit temporal, holographic apparition.

Given the determinations discussed earlier, and the theories and proven facts advanced in this chapter, rather than focusing on medical interventions that poison cells, destroy tissues, and kill entire organisms, far more rational, lower risk, less costly, and potentially far more effective therapeutic approaches are now possible. After reading this chapter you might agree with these authors, the best of life in the healing arts and sciences is close at hand.

Polychromatic States and Health:

A Possible Unifying Theory

Prigogine’s 1967 description of dissipative bioenergy structures provided a model, and an understanding, of how open systems that have an uninterrupted flow of energy can self-organize. Clearly, living organisms (i.e., biological systems) are designed to take in, and utilize, energy from chemical sources (e.g., food). But you also utilize energy and information from resonant interactions with electromagnetic fields and acoustical waves. All of these sources of energy contribute to the maintenance and dynamic organization of life.

According to Dr. Mae-Wan Ho, “Energy flow is of no consequence unless the energy is trapped and stored within the system where it circulates before being dissipated.”(Ho, 1996) Similarly, in biology, cellular structures transduce, store, conduct, and couple energy critical for life to continue.

As Prigongine advanced decades ago, living systems are characterized by a complex spectrum of coordinated action and rapid intercommunication between all parts.(Ho, 1996) Thus, the ideal activity spectrum of a healthy organism is *polychromatic* where all frequencies of stored energy in the spectral range are equally represented and utilized. Simply speaking, *in an unhealthy state, some frequencies may be present in excess or other frequencies may be missing.*

For example, it has been reported that a healthy forest emits a polychromatic spectrum of acoustical frequencies. Alternatively, unhealthy forests have holes in their frequency spectrums. Yet, when a forest regains its health, according to Dr. Ho (1996), it again emits a polychromatic spectrum of frequencies. The frequency holes somehow get filled in!

When an area of your body is not properly communicating with nature, that is, receiving its polychromatic energy spectrum from the nurturing universe, your “temple of God” will attempt to balance by relying on its own strengths and alternative energy resources. This energy impoverishment, according to Dr. Ho, leads to stress and disease. In using cardiac frequency analyzers, for example, sick people have been determined to have less heart rate variability than healthy individuals. Dr. Ho interprets this as indicating polychromatic energy frequency impoverishment.

For the wide-ranging discussions advanced in this chapter, polychromatism is a unifying concept. It can help you comprehend technically complex phenomena, such as the healing effects of sunlight, full spectrum lights, music, tuning forks, chanting, toning, drumming, crystal bowls, sound therapy, prayer, love, the sound of a loved one’s voice, and the feeling of their touch, es-

sential oils, flower essences, multiwave oscillators, acupuncture and homeopathics. Some missing frequency or frequencies are apparently provided by these resonance therapies.

Another pioneer in this field was the legendary Dinshah P. Ghadiali. Rather than calling it polychromatism, he advanced the therapeutic science known as spectrochrometry. “Dinshah,” as he preferred to be called, made use of colored light exposures to various body parts to correct frequency deficiencies. His books are well worth investigating and applying in clinical therapeutics. When missing frequencies are supplied, they fill in the gaps in the frequency spectrum of life.

Alternatively, when frequencies of sound or light are in excess in your body, many more modern therapeutic technologies can identify these “pathogenic frequencies,” and provide therapeutic resonances that neutralize, by phase reversals, the problematic energy excess. Electromagnetic technologies, such as Rife frequency generators and radionics machines, heartily demonized and controlled by the medicalpharmaceutical establishment, theoretically act similarly through phase reversals and neutralization of pathogenic frequencies.

Royal R. Rife was a brilliant microscopist. He designed his equipment to use crystal resonant energy transmissions. His therapeutic devices caused pathogenic organisms to oscillate to the point of destruction.

If you consider polychromatism to be a simple model for understanding health versus disease, then it makes sense for you to investigate and test technologies that detect frequency imbalances (excesses and deficiencies), such as electrodermal screening and voice analysis. See if these can play beneficial roles in your health care. We believe that doctors will increasingly utilize these on-invasive, low cost, and low risk methods.

The following sections relate this knowledge, and advances in our scientific understanding, to electrogenetic-based therapies. We discuss electromagnetic (photon) and sound (phonon)

potentials and their influence upon genetic expression and the science of creationism. Drs. Iona and Alan Miller provide highly advanced technical insights into electrogenetic links to brain function and even consciousness. Dr. Michael Hyson's fascinating research examines the sonic capabilities dolphins display using their uncanny diagnostic and therapeutic skills. The dolphin model may best demonstrate life's greatest potential for using these and other electromagnetic and bioacoustic phenomena for healing and enhancing genetic expression.

Language and Bioacoustic Influence Upon Genetics

Apparently, DNA can be activated by specific frequencies and even words. Approximately 92% of DNA is not used in coding for protein synthesis. For the political and economic reasons discussed in previous chapters, this vast part of the human genome is not openly valued by Anglo-American investigators. They call it "junk" DNA despite its immense relevance to the biological, social, and even metaphysical sciences. In other words, if it doesn't fit the political agenda of those who control the various fields of science and media, in service to Malthusian iatrogenocide, it is trashed as "junk." Those who advance such reasonable alternatives with fundamental truths are called "quacks."

Fortunately, basic truths have ways of coming to light. Thankfully, the influence of language and bioacoustics on electrogenetics has been the focus of research in Russia for decades. Such pioneering efforts are currently predicted to expand the practices of bioacoustics and electrogenetics by practitioners worldwide as we prompt genetic restorations and cellular up-regulations through electromagnetic and bioacoustic frequency vibrations.

According to an English translation of *Vernetzete Intelligenz* ("Networked Intelligence"), a text by Soviet scientists Fosar and Bludorf, DNA activation occurs by words and sounds. More than direct healing applications and technologies, these authors' work,

translated by Sol and Leigh, explains phenomena such as auras, clairvoyance, intuition, spontaneous and remote acts of healing, affirmation techniques, and even consciousness itself as you will soon learn.(Fosar and Bludorf, 2004)

During the past few years, teams of linguists and geneticists joint ventured to explore the restricted area of “junk” DNA. They determined that this part of the sacred spiral primarily serves communication functions. It facilitates data storage and retrieval along with information transmission. Linguists found that the genetic code “follows the same rules as all human languages.”

To prove this, Russian scientists compared the rules of syntax (the way in which words are put together to form phrases and sentences), semantics (the study of meaning in language forms) and the basic structures of grammar between human language and DNA.(Fosar and Bludorf, 2004)

They found that DNA codes contain a regular grammar. Its sequences have set rules similar to human languages. Thus, they theorized, human languages reflect the Sacred Spiral’ structure.

“The Russian biophysicist and molecular biologist Pjotr (Peter) Gariaev and his colleagues also explored the vibrational behavior of DNA. Gariaev concluded, ‘Living chromosomes function just like holographic computers using the DNA’s own laser radiation.’ Gariaev and his team managed, for example, to modulate certain frequency patterns onto a laser beam and thereby influence DNA frequency information and its communication.

“One revolutionary implication of Gariaev’s research” is that you can “simply use words and sentences of any human language, to modulate DNA” frequency emissions. During one experiment live DNA, that is, DNA in living tissue (i.e, in vivo not in vitro), responded to “language-modulated laser beams and even radio waves. This response was frequency dependent and frequency specific. In this way, the investigators theoretically explained how and why healing affirmations and hypnotherapies

have such strong effects.”(Fosar and Bludorf, 2004)

Gariaev and his colleagues “tested devices that influence cellular metabolism through modulated radio and light frequencies. This technology proved capable of safely (i.e., noninvasively) repairing damaged DNA.”(Fosar and Bludorf, 2004) Using similar methodologies, x-ray damaged chromosomes were sonically repaired.

This team even reported capturing “information patterns of particular DNA and transmitted them to other DNA, thus transforming cells to another genome.” For example, they are believed to have successfully transformed frog embryos into salamander embryos by simply exposing them to human language frequencies that impacted their inherent genetic program. “In this way, all the information was transmitted without any usual side effects or disharmonies encountered with splicing single genes.”(Fosar and Bludorf, 2004)

Again, all of this was accomplished using vibrational language to affect DNA. Gariaev’s work demonstrated, very persuasively, the creationistic process by which DNA receives, stores, retrieves, and relays frequency-dependent information upon which species variations depend.

As reported earlier in this book, DNA seems to be transmitting the equivalent of heavenly love songs. From this music played through genetic equipment variations in sacred geometric forms materialize in space.

Spiritual instructors have known for millennia that “the temple of God,” your physical body, responds best to empathic language, loving words, and positive thoughts. Dr. Masaru Emoto documented this, likewise, in his book, *The Message from Water*. Here, clustered water upon which DNA functionally depends for its energetic capacitance and frequency transmissions responded to uplifting words versus harsh curses or condemnations.(Emoto, 1999)

Gariaev's research suggested that genetic expressions potentially relay specific constructive, or reconstructive, frequencies. This helps explain the genetic link to people responding better to interventions such as prayer. It suggests a link between positive loving heartfelt intention and improved therapeutic outcomes, as mediated through DNA.

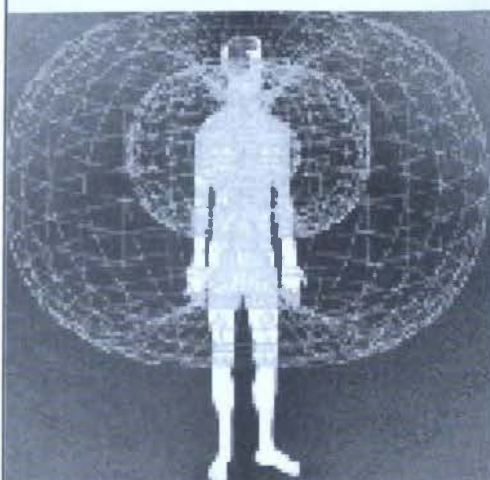
As Dr. Horowitz has often explained to his audiences, the time is rapidly approaching when spiritual (or faith) healers will administer the most predictable hands-on therapies to prompt disease reversals and health enhancements. Researchers like Gariaev, Emoto, Fosar, Bludorf, and Alan and Iona Miller, whose combined efforts are reviewed below, have been developing the scientific understanding to demystify how and why healing takes place, and will be ideally practiced from this time forward.

DNA: Your Creative Universal Connection

Are you aware that your DNA electro-expression affects the rest of the universe? We know, as with most people, you may perceive yourself as largely impotent in shaping your life. But researchers have found "junk DNA" can cause disturbance patterns in the universe at large. In fact, genetic expression has been found to impact the infinite matrix of space. This electrogenetic affect produces small magnetized wormholes of a subquantum nature. This means that you, and other humans, are far more powerful than most people imagine in impacting the world around us. Indeed, this finding alone offers great hope for co-creating a better world and brighter future.(Fosar and Bludorf, 2004)

"These DNA-activated wormholes, equivalent to the so-called Einstein-Rosen bridges in the vicinity of black holes, are connections between different areas in the universe through which information can be transmitted outside the space-time continuum." Incredibly, DNA is involved in this universal communications network.(Fosar and Bludorf, 2004)

Fig. 12.1. Electrodynamics of Natural Therapies



Contrary to years of now disproven scientific consensus, **form does not follow function!** It follows electromagnetic or bioacoustic wave resonances and entrainments, otherwise known as "creationism." Pulsed wave patterns, including biofields, L-fields, electrodynamic fields, or morphogenic fields, encode structure. These are terms for the *biophysical theory* that living organisms are organized by fields. The theory refers to the concept

that electromagnetic fields organize embryological development and guide the processes of regulation, repair, and regeneration.

The electromagnetic field (EMF) in this theory helps to establish the creative energy matrix that shapes and regulates the organism. Inherent in the concept of a biofield is that the organism responds to oscillating fields external to the body and emits oscillations (acoustical and electromagnetic) that can be measured and impact the environment.

Health, or consciousness, could be defined as coherence of coupled oscillations and balance of energy flow in phase with the nature or the creative spirit.

Therefore, treatment should focus on identifying and resolving repeating incoherence in the organism to reestablish energetic balance.

To detect and correct imbalances in the biofield, methods of choice include: hands on healing; prayer; photonic devices; meditation; EDS devices; Qi Gong; acupuncture; Tai Chi; neural therapy; homeopathics; herbal extracts and essential oils each of which carries its unique frequency and therapeutic indication; microcurrent devices; and frequency delivery appliances.

All of these devices attempt to normalize self assembly, and all accomplish this by influencing DNA, biofields, and bioholographics—the organizational forces of biomolecules, nervous system developments, and life.

Bioacoustically and electrogenetically directed self-organization (i.e., energetically-directed auto-organization) of molecular and cellular structures is a spontaneous process that takes place when electrochemical and electromagnetic conditions support assembly. Nédélec and associates have shown that homogeneous solutions of the protein tubulin mixed with the protein kinesin, with ATP as an energy source, will undergo spontaneous self-organization akin to holographic physical precipitation.

The Sacred Spiral attracts bits of information coursing through subspace and delivers them to your being, and sometimes even your waking consciousness. This process of “hypercommunication” is enhanced in states of relaxation. Stress, worry, or hyperactive cognitive function (i.e., self talk), prevent successful hypercommunication. Such stress factors apparently cause electrogeneticintuitive channels to become blocked. This results in distorted transmission and useless communications.(Hyson, 2004)

“In nature, hypercommunication has been successfully utilized for millions of years. The organized flow of life in insect colonies proves this dramatically. . . . When a queen ant is separated from her colony, building continues fervently and according to plan. If the queen is killed, however, all work in the colony abruptly stops. Apparently, the queen sends the ‘building plans,’ even from far away, via the group’s consciousness. She can be as far away as she wants, as long as she is alive,” she continues to transmit electrogenetic messages through subspace to her relatives.(Fosar and Bludorf, 2004)

You experience hypercommunication when you suddenly gain access to information that lies outside your normal rational waking consciousness. Such communication is then experienced as inspiration or intuition. In writing the “Devil’s Thrill Sonata,” for instance, the Italian composer Giuseppe Tartini first dreamed that a devil sat by his bedside playing the violin. The next morning, he wrote the entire musical score precisely from hyper-conscious memory inspired by his electrogenetic dream.(Fosar and Bludorf, 2004)

When this type of hypercommunication occurs, DNA can be observed to undergo distinct changes, according to Gariaev and others.

“The ‘side effect’ encountered most often in hypercommunication in humans is the existence of otherwise inexplicable electromagnetic fields” and phenomena in the vicinity of certain

people. Electronic devices such as computers and CD players can be affected, and even cease operating, for no apparent reason, depending on the energy output of people. When their electromagnetic fields slowly dissipate, electrical devices may be observed to resume normal operations.(Fosar and Bludorf, 2004)

In *Vernetzte Intelligenz*, Fosar and Bludorf examined historic records proving humanity was much like various other species that lived strongly connected to their communities. We maintained, to a much larger degree, a “group consciousness.” These doctors theorized that to develop individuality, we somehow forgot our hypercommunication skills. By returning this knowledge and skill to the human community, our global population can regain “access to all information via DNA without being forced, or remotely controlled. . . .” (Fosar and Bludorf, 2004)

Much like e-mailing over the Internet, your DNA can send and receive powerful data through a universal network of ether. Human consciousness is, likewise, interconnected. You can receive, send, and interpret what might be called “intuitive data” this way. Remote healers use this subtle energy network, why not you?

The Power of DNA in the Philosophy of Now

Philosophically related to this discussion is Eckhart Tolle’s monumental bestselling treatise, *The Power of Now*. In considering consciousness and “inner body awareness,” Tolle related his spiritual experience of the universal energy in terms reflecting scientific advances in electrogenetics.

Divert your attention in this section to consider Tolle’s philosophy of “Now,” and its relationship to your creative consciousness.

“What you perceive as a dense physical structure called the body;” Tolle suggested, “which is subject to disease, old age, and death, is not ultimately real. . . . It is not you. It is a misperception of your essential reality that is beyond birth and death, and is due

to the limitations of your mind, which having lost touch with being [primal essential energy of universal consciousness] creates the body as evidence for its illusory belief in separation and to justify its state of fear. . . . But do not turn away from the body.

“For within that symbol of impermanence, limitation and death, that you perceive as the illusory creation of your mind,” Tolle continued, “is concealed the splendor of your essential and immortal reality. Do not turn your attention elsewhere in your search for the truth. For it is nowhere else to be found, but within your body. Do not fight against the body, for in doing so you are fighting against your own reality. You are your body; the body that you can see and touch is only a thin illusory veil. Underneath it lies the invisible inner body—the doorway into being; into life unmanifested. Through the inner body you are inseparably connected to this unmanifested One life . . . [which is] birthless, deathless, eternally present. Through the inner body you are forever one with God. . . .

“Beyond the beauty of [your] external form there’s more here—something that cannot be named. Something ineffable. Some deep inner Holy essence. Whenever and wherever there is beauty, this inner essence shines through somehow. It only reveals itself to you when you are present [i.e., purely conscious in the now.]”

With questions similar to those posed below by “the phantom DNA effect” concerning the electrogenetic subspace vacuum theory of transmitted consciousness, Tolle asked, “Could it be that this nameless essence and your presence are one and the same? Would it be these without your presence?” Tolle urged, “Go deeply into it. Find out for yourself.”

Tolle on Evolution

“Everything that exists has being, has God essence, has some degree of consciousness. Even a stone has rudimentary consciousness. Otherwise, it would not be. It’s atoms and molecules would just burst [or fall apart]. Everything is alive—the sun, the earth, plants, animals and humans. All are expressions of consciousness in varying degrees—consciousness manifesting in form. The world arises when consciousness takes on shapes and forms—thought forms and material forms.

“Look at the millions of life forms on this planet alone, in the sea, on land, and in the air. And then each life form is replicated millions of times. To what end? Is someone or something playing a game? A game with form? This is what the ancient seeks of India asked themselves. They saw the world as Lela—a kind of Divine game that God is playing. The individual life forms are obviously not very important in this game. In the sea, most life forms do not survive for more than a few minutes. . . . The human form turns to dust pretty quickly too. And when it is gone, it is as if it had never been.

“Is that tragic or cruel?

“Only if you create a separate identity for each form. If you forget that its consciousness [or energy] is God-essence expressing itself in form. But you don’t truly know that until you realize your own God-essence as pure consciousness.

“If a fish is born in your aquarium, and you call it John, write out a birth certificate, tell him about his family history, but two minutes later he gets eaten by another fish, that’s tragic. But it’s only tragic because you projected a separate self where there was none. You got hold of a fraction of the dynamic process, a molecular dance, and made a separate entity out of it.

“Consciousness takes on the disguise of forms until they reach such complexity that it completely loses itself in them. In present day humans, consciousness is completely identified with

its disguise. It only knows itself as form and, therefore, lives in fear of the annihilation of its physical or psychological form. This is the egoic mind, and this is where considerable dysfunction sets in.

“It looks as though something went very wrong somewhere along the line of evolution. But even this is Lela—part of the Divine game. . . .

“Finally, the pressure of suffering, created by this apparent dysfunction, forces consciousness to disidentify from form, and awakens it from its dream of form. It regains self consciousness, but it is at a far deeper level than when it had lost it.

“This process is explained in Jesus’ parable about the lost son who leaves his father’s home, squanders his wealth, becomes destitute, and is then forced by his suffering to return home. When he does, his father loves him more than before. The son’s state is the same as it was before, yet not the same. It has an added dimension of depth. The parable describes a journey from unconscious perfection, through apparent imperfection and evil, to conscious perfection.” Tolle asked, “Can you now see the deeper and wider significance of becoming present as the [conscious] watcher of your mind?”

The “Phantom DNA Effect”

Consistent with Tolle’s philosophy of consciousness, and benefits of “being in the ‘Now,’” consider the work of doctors Iona and Alan Miller. Their thesis pertained to the electrogenetics of consciousness. They discussed the “phantom DNA effect” discovered by Gariaev in Russia which also supported Tolle’s assertions. A unified subliminal field of potentially universal consciousness apparently exists, they determined, and may be explained as emerging from a previously overlooked physical vacuum or energy matrix.(Miller et al., 2002)

Gariaev et. al., irradiated DNA samples with lasers. On their video monitors, typical wave patterns formed. When they removed these irradiated DNA samples from the experimental containers, the wave patterns did not disappear! Repeated experiments showed that the “phantom” energy patterns continued to emanate from the removed genetic samples somehow. Apparently, the electrogenetic fields, and related frequency vibrations, remained “intact and capable of transmitting over long distances through wormholes” in space and time. This effect is now referred to as the “phantom DNA effect.” Energy beyond space and time “continues to flow through activated wormholes, and DNA appears to be the amplifier for this hyperspace level of communication.”(Fosar and Bludorf, 2004; Miller et al., 2002)

Regarding consciousness, these observations provided both quantitative and qualitative data that heavily supported Tolle’s philosophy. The Millers concluded that a unified nonlinear quantum field exists in reference to a physical theory, if not Tolle’s philosophy, of consciousness. The DNA phantom field effect supported their assertions of a unified field of consciousness which likely emerges from nonphysical dimensions of space.(Miller et al., 2002)

Gariaev’s surprising experiments, as described by Poponin (1995), showed that when DNA was put in a scattering chamber and bombarded with laser light, a “phantom” was revealed, even after the DNA itself had been removed. The vibrational modes of DNA in solution were studied using a sophisticated “MALVERN” laser photon correlation spectrometer (LPCS), which tests the fluctuation dynamics of DNA solutions. The researchers bombarded the DNA with weak coherent laser radiation in two frequencies. The intensity of the scattered light was measured, as well as nonlinear localized excitations.(Miller et al., 2002)

Gariaev’s methods and materials were described by Poponin as follows:

"In each set of experimental measurements with DNA samples, several double control measurements are performed. These measurements are performed prior to the DNA being placed in the scattering chamber. When the scattering chamber of the LPCS is void of physical DNA, and neither are there any phantom DNA fields present, the autocorrelation function of scattered light looks like the . . . typical control plot . . . [of] background random noise counts of the photomultiplier. Note that the intensity of the background noise counts is very small and the distribution of the number of counters per channel is close to random. [Data] demonstrates a typical time autocorrelation functions when a physical DNA sample is placed in the scattering chamber, and typically has the shape of an oscillatory and slowly exponentially decaying function. When the DNA is removed from the scattering chamber, one anticipates that the autocorrelation function will be the same as before the DNA was placed in the scattering chamber. Surprisingly, and counter-intuitively, it turns out that the autocorrelation function measured just after the removal of the DNA from the scattering chamber looks distinctly different from the one obtained before the DNA was placed in the chamber. . . Two conditions are necessary in order to observe DNA phantoms. The first is the presence of the DNA molecules and the second is the exposure of the DNA to weak coherent laser radiation." (Poponin, 1995).

Researchers hypothesize that some new field structure is being excited from the physical vacuum substructure. As long as the chamber is not disturbed, it is measurable for long periods of time. What is measured is light scattering from the DNA phantom fields. What is attained is qualitative and quantitative information about the nonlinear dynamic properties of the phantom DNA fields. Its origin is related to physical DNA. As yet, researchers have found no other substance which recreates or emulates the effect of the DNA molecule.

It is this model which suggests a more general nonlinear quantum theory which may explain many of the observed subtle energy phenomena and might lead to a physical theory of consciousness according to Miller, Miller and Webb (2002).

Research has shown there is a strong correlation between modulation of your brain's EM field and the energy of "consciousness." (Persinger, 1987; McFadden, 2002). Related to this was Gariaev's discovery of a wave-based genome and DNA phantom effect. All of this speaks to energetic influences transmitted through subspace or some yet-to-be-determined energy matrix, explained Miller et al. Their theory integrates the more esoteric realms of physics and metaphysics including human consciousness.

DNA and Quantum Bioholography

In their excellent literature review, Richard Alan Miller, Iona Miller, and Burt Webb explored in *The Ionosphere* (http://www.geocities.com/iona_m) the rapidly advancing frontier of genetic science as it pertains to quantum bioholography. This specialty field in electrogenetics relates the human genome to a computer model. It also asserts universal energy field connections between genetic expression and creative consciousness. Although related discussions are highly technical and multidisciplinary, this electrogenetic specialty field is well worth exploring.

According to Miller, et al., from the Organization for the Advancement of Knowledge, in Grants Pass, Oregon, "Complex information can be encoded in electromagnetic (EM) fields, as we all know from coding and decoding of television and radio signals." However, even *more* complex information can be encoded in holographic images.

Research shows that DNA, in fact, produces its amazing creative effects by acting as a holographic projector of acoustic and EM information. DNA's electromagnetic and acoustic data, reported Miller, et. al., "contains the informational quintessence of the [human] biohologram. Here is a summary of their thesis:

"Only 3% of human DNA encodes the physical body. The remaining 97% of the 3 billion base pair genome contains over a

million genetic structures called *transposons*, that have the capacity to jump from one chromosomal location to another.”(Kelleher, 1999) You are 99.9% identical to other humans in shared genetics. Your “individuality is expressed in three million small variations in cells, called single nucleotide polymorphisms. . . . Gene-expression is the mechanism by which new patterns are called into being” from these small variations.(Rossi, 2000)

The holographic concept of genetic expression that results in precipitated reality, according to Miller, et. al. operates using both photons and phonons.(Miller, Webb, Dickson, 1975) “Superposed coherent waves of different types in the cells interact to form diffraction patterns, firstly in the acoustic domain, secondly in the electromagnetic domain.” The resulting manifestation is “a quantum hologram—a translation process between acoustical and optical holograms.”

This process is affected by various therapeutic modalities. “Creative, novel, and enriching psychotherapeutic experiences,” for example, can result in genetic expressions which facilitate mindbody communication and healing. In this way, DNA communications “can have a long-term transformative effect on the whole person.”(Rossi, 2002).

Thus, our genetic understanding of bioholography has relevance to optimizing health, well-being, and even self-realization. “It is relevant in biophysics, medicine, psychobiology, psychotherapy, and the holistic healing arts and sciences. Given this knowledge, we gain a “genetically integrated model of the complex dynamics of the mindbody—one arising in the domain underlying the standard genetic code triplet model.”(Miller, Miller and Webb, 2002)

The Biohologram Hypothesis and Consciousness

By this juncture, you now know that the organization of any biological system is established by a complex electrodynamic field which is, in part, determined by its atomic physicochemical components. These, in part, determine the behavior and orientation of these components, and otherwise, largely, its genetic expressions. This dynamic, in keeping with the information in the above section, is mediated through wave-based genomes wherein DNA functions as the holographic projector of the psychophysical system—a quantum biohologram.” in the words of Miller et al.

Expanding this discussion into the more technical realm of creative consciousness, models of the mindbody relationship have been developed by these and other investigators. The above newly recognized principles in genome function integrate dynamics consistent with both your psychophysical nature and consciousness at various levels.

Technically and esoterically speaking, the Miller et al., model “invokes a fractal link between neurodynamic chaos and quantum uncertainty. Transactional wave collapse allows this link to be utilized predictively by every cell.” In this way genetic expression involving consciousness and bioholography bypasses, yet complements, formal computation. In every case of species differentiation, this quantum evolution is orchestrated by genetic information transduction through the Sacred Spiral.

In 1994, the Gariaev group proposed the “Wave-based Genome theory” wherein DNA-wave functions were likened to communication mechanisms within a “biocomputer.” They suggested that: (1) human DNA codes include genetic “texts” similar to natural context-dependent language texts; (2) that the chromosome apparatus acts simultaneously as a source and receiver of these texts, decoding and encoding them respectively; and (3) the chromosome continuum acts like a holographic grating, dynami-

cally displaying or transducing weak laser light and solitonic electroacoustic fields.(Miller, Miller and Webb, 2002)

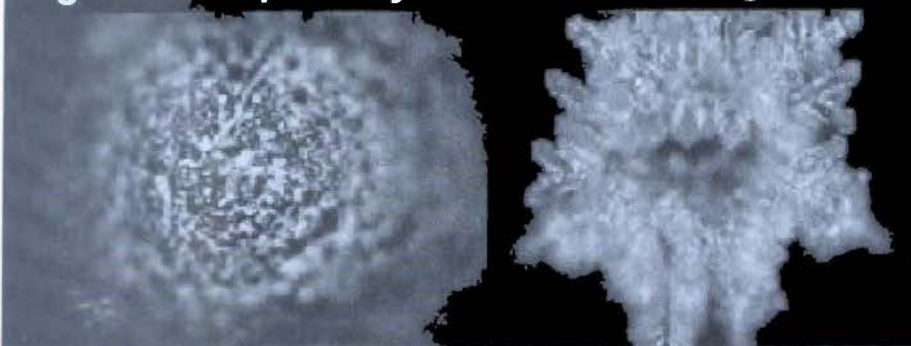
According to Miller et al, physical life in sacred geometric fashion occurs as a result of the fractal distribution of the character frequencies in genetic texts. The “nucleotides of DNA molecules are able to form holographic pre-images of biostructures.” This process of “reading and writing” the very matter of our being manifests from the genome’s associative holographic memory in conjunction with its quantum nonlocality. Rapid transmission of genetic information and gene-expression unite the organism as a holistic entity embedded in the larger” electromagnetic and bioacoustic universe. In essence, the human system works much like a “wave biocomputer.”(Miller, Miller and Webb, 2002)

Solitons and Quantum Nonlocality in Genetic Expressions

The quantum nonlocality of genetic information signaling is fundamental to life and this discussion. Experimental work by Gariaev et al., showed how quantum nonlocality is directly related to laser radiation from chromosomes in the form of coherent light. This energetic radiation jitterbugs along its polarization plane to radiate or occlude photons. According to Miller et al., the Sacred Spiral has now been shown to operate akin to an active “laser-like” environment. “Roughly speaking, DNA can be considered as a liquid crystal gel-like state that acts on the incoming light in the manner of a solitonic lattice.”(Miller, Miller and Webb, 2002)

“A soliton is an ultra stable wave train that arises in the context of nonlinear wave oscillation,” Miller et al., explained. “The DNA reading process can be modelled as a complex mechanical oscillator capable of producing solitonic wave transmissions. DNA, modeled as a kind of rotary pendulum, can be simulated as a chain of nonlinear oscillators. Complex dynamic patterns arise

Fig. 12.2. Liquid Crystals and Electrogenetics



Flash frozen water samples taken before (left) and after (right) a prayer ceremony was conducted with the loving intention to restore the sacred geometry of water close to where the Rum River meets the Mississippi River. Source: Terri Peterson and <http://www.thank-water.net/english/>.

In 1937, Dr. Albert von Szent-Gyorgyi won the Nobel Prize in science for his work in water structuring. More recently, Japanese investigator Masaru Emoto photographed structured water largely responsible for DNA's electrogenetic and bioacoustic expression. Much like liquid crystal proteins that are organized into sacred geometric spiraling patterns, the clustered water molecule shown above at the right, is beginning to exhibit the sacred geometry of a hexagon. Fern-like crystalline structures reminiscent of leaves adorn the main water ring. Such water has been found and studied at several of the world's most famous healing springs. It has also been consistently proven to be produced with loving intent and prayer.(Emoto, 2000)

Wise people say, "As above so below . . . On Earth as it is in Heaven." Dr. Emoto's work proves that water, the basis of all life, takes on the physical dimensions of a generally unseen universal subspace energy. Naturally, given water's importance, we see similar beauty and organization in sacred geometric formations in life's more complex structures, such as liquid crystal proteins and DNA. Nearly everyone has heard of "crystal radios." But few realize all life operates, likewise, using radio waves and polarized light that water crystals are seen to reflect and to which they respond. The polarizations of liquid crystal phases of Chromosomes, for instance, are reflected quantumly throughout living organisms like laser mirror analogues, according to Miller, et. al., (2002). These provide a "fractal environment" within which bioacoustic and electromagnetic energy creates a "coherent continuum of quantum-distributed polarized radio waves" doing far more than securing your health. These elements directly connect you to the universe at large and to Supreme consciousness. This, according to several leading geneticists, is the main function, and information channel, of DNA.

when taking into account the nonlinear covalent connections between nucleotides.”(Miller, Miller and Webb, 2002)

Researchers in this field suspect the ability of chromosomes “to transform their genetic-sign laser radiations into broadband genetic-sign radio waves. The polarizations of chromosome laser photons are connected nonlocally and coherently to polarizations of radio waves.”(Miller, Miller and Webb, 2002)

To summarize, recent scientific genetic determinations provide “an explicit physical analogue for the traditional mystical apprehension of ‘inner light’ and the ‘audible life stream.’ This is the main information channel of DNA, the same for both photons and radio waves. Superposed coherent waves of different types in the cells interact to form diffraction patterns, *firstly in the acoustic domain*, secondly in the electromagnetic domain.” What results is “a quantum biohologram—a translation process between acoustical and optical holograms.”(Miller, Miller and Webb, 2002)

Genetic Bioacoustic Technologies Underlying Creationism

The polarizations of chromosome laser photons are connected nonlocally, that is in subspace, and coherently to polarizations of radio waves. These signals can be genetically “read” without any loss of the information. The liquid crystal phases of the chromosome are like laser mirror analogues. These provide a “fractal environment” within which localized photons may be stored. This bioacoustic and electrogenetic system creates, according to Miller et al., “a coherent continuum of quantum nonlocally-distributed polarized radiowave genomic information.”(Miller, Miller and Webb, 2002)

“The genetic wave information from DNA, recorded within the polarizations of connected photons, being quantum nonlocal, constitutes a broadband radio wave spectrum.” This bioacoustic spectrum is “correlated, by means of polarizations,” with life’s

light energy photons. *This is the main information channel of DNA*, the same for both photons and radio waves.”(Miller, Miller and Webb, 2002)

Technically speaking, “this biocomputer memory and retrieval program features photon-laser-radiowave polarization spectroscopy.” Miller et. al., described complex dynamics that are expressed as “fractal patterns at all levels of organization in nature.”

You are no exception! The fundamental notion here is that your photon-laser-radiowave electrogenetic system utilizes “the Fourier-spectra of the radiowaves of crystals, water, metals, and DNA, and more, to store, for varying times by means of laser mirrors, creative, instructive, or even evolutionary data.

Gariaev (1994) and Miller, et al., (2002) advanced the first theories and examples of this novel genetic storage/recording environment which utilizes laser mirrors. These, they reported, were capable of “directly recording the space-time atomic/molecular rotary dynamical behavior of objects” in space or objective reality. This, they attested, also demonstrated an essentially new type of radio signal. Here, information is “encoded by polarizations of electromagnetic vectors.” This formed the basis for comparing reality to “a new type of still or video recording”—life being like an organic cinema!

This newly detected system which integrates creative consciousness and physical reality also uses the phenomenon of “quantized optical activity” as the means by which you automatically self regulate. This bioacoustic/electrogenetic system thus obtains unlimited information on ongoing metabolism. “Such information is read by endogenous laser radiations of chromosomes.” Chromosomes, in turn, produce the regulative (i.e., “semantic”) radio emissions to operate the human genome-driven biocomputer.

More on Quantum Bioholography: Creative and Mystical Consciousness

In the 1971 publication *Languages of the Brain*, Pribram theorized that a neural hologram was made by wave interactions within the cerebral cortex of the brain. This, in turn, was contingent upon a hologram of much shorter wavelengths that was formed by wave interactions at the subatomic level. In essence, a hologram within a hologram produces life as a function of creative consciousness. At least, there is ample evidence supporting the interrelatedness of the two holograms which somehow gives rise to your sensory imaging.(Miller, Miller and Webb, 2002)

Bohm, in 1980, in *Wholeness and the Implicate Order*, went further. He declared the brain appears to operate as a hologram interpreting a holographic universe. In this dualistic holographic model, inseparable interconnectedness of holographs, including that of the Creator with the created, underlies human existence. It is rooted, they argue, in your “existential blueprint”—DNA.

Similarly, according to Miller et al., your brain is a “hologram, enfolded within your holographic mindbody,” which is also “enfolded within a holographic universe.(Miller, Miller and Webb, 2002)

Recent discoveries by Gariaev, et al., followed by Poponin’s contributions, support Miller et al.’s conclusion that “the human being is a transducer of universal energy and consciousness”—essentially a biospiritual computer with data processed holographically.

Poponin boldly suggested, in 1995, that this deeper understanding of life’s genetic mechanisms, including subtle energy dynamics, best explains how and why observed alternative healing phenomena occurs. This offers a physical theory of consciousness according to Poponin (1995) and Miller et al., (2002). Their related hypotheses are based on precise quantitative measures which combine both quantum mechanics and quantum complex-

ity. The later involves chaos dynamics. They posit that some new field structure is being excited from the background “physical vacuum,” or etheric energized matrix, of the universe as expressed through DNA.

Gariaev discovered the “DNA Phantom Effect” in 1985 while working on correlating DNA, ribosomes, and collagen spectroscopically at the Institute of Physics, in the Academy of Science in Russia. He first published his results in 1991, and later in 1994 in *Wave Based Genome*. His “DNA Phantom Effect” demonstrated a dynamic field in the vacuum substructure of physical reality. These and related experiments were reproduced in Moscow and at Stanford. According to Miller, et al., (2001) new research directions and applications of this work are forthcoming and highly promising, particularly as it relates to the healing arts and sciences.

Miller and Webb are credited with having pioneered this field with their earliest work, “A Holographic Concept of Reality.” This appeared in the journal *Psychoenergetic Systems*. “Holographic Concept” was later reprinted in their book.(1993) In 1993, author Iona Miller presented “The Holographic Paradigm and the Consciousness Restructuring Process.” She wrote it to advance psychotherapeutic mindbody healing. Herein, the role of consciousness is addressed in process-oriented psychotherapy. Her interest in the nature of *Synergetics* (Fuller, 1975), cosmic zero, the vacuum potential, or quantum foam, led her to develop innovative applications of chaos theory in consciousness studies. Her work reinforced the importance of light and sound in therapy as reported throughout history by prophets and mystics.(Singh, 1979; Blavatsky, 1987; Puri, 1964; Miller and Miller, 1983). She concluded that medical intuitives somehow perceive holographic processes when they look inside themselves.

As early as 1973, Miller and Webb suggested that bioholograms were the projectors and projections of our material world. From DNA in the nuclei of each cell in your body, they reasoned,

your whole physical body was miraculously manifested in sacred geometric fashion. They proposed that DNA “could be projecting a field that would be experienced by other DNA in the body.” Then bioholographically projected again from there. ‘

DNA, it is now known, possess a substance/wave duality which is similar to the dualism of elementary particles. In accordance with this duality, DNA codes all living organisms in two ways, both with the assistance of DNA matter involving RNA and enzymes for protein synthesis, and by DNA sign wave functions, including coding at its own laser radiation level that functions bioholographically.(Miller, Miller and Webb, 2002)

“The genetic apparatus can be nonlocal at the molecular level (holographic memory of a chromosome continuum) and at the same time quantum mechanically nonlocal in compliance with the Einstein-Podolsky-Rosen effect,” Miller and coworkers explained. “The latter means that the genome’s genetic and other regulatory wave information is recorded at the polarization level of its photons, and is nonlocally transferred (plays out everywhere and in no time) throughout the entire space of a biosystem by the polarization code parameter. This helps to set quick-response information contacts among the billions of cells constituting an organism.”(Miller, Miller and Webb, 2002)

More practically speaking, this also explains how and why holistic healing methods such as homeopathics, and other therapies that rely on subtle energies, can effect virtually instantaneous responses throughout your body, and thus prompt hastened recoveries. Alternatively, given this new understanding of DNA’s two part subtle energetic expression, the medical/pharmaceutical approach to healthcare and healing can be seen as irreconcilably barbaric—like shooting a snake with a nuclear warhead.

Gariaev also claimed at the beginning of this millennium that your genome as a whole, besides your individual cells containing nuclei mostly composed of DNA, generates and recognizes unique language, as previously mentioned, that he called “text-

associative regulatory structures.” The pharmaceutical approach to healthcare does nothing to enhance, only further destroys, this biological language and bioholographic communications network. The operation of these life regulators depends upon the background principle of holography and quantum nonlocality; not physical chemistry. (Gariaev, et al, 2000).

To better appreciate this most amazing understanding, Miller et al. explained that DNA creates a “complex pattern of three-dimensional electromagnetic standing and moving wave fronts in the space that the organism occupies.” This is the “biohologram.”

Given this understanding, as Dr. Horowitz has explained in numerous lectures, you do not have your blue eyes or brown hair simply because your parents gave you these genes for eye and hair color. In fact, at every instant, your creationistic antennae to the Divine Source of the universe—your DNA—is “sending signals through subspace that remanifest, or reprecipitate, your physical body parts every now, now, now, now. . . .”(Horowitz, 2002)

Gariaev’s electrogenetic photon findings have now been corroborated by other researchers. Multifrequency fields are teleported to remanifest physical reality just as Horowitz surmised.

Taking this science and scientific hypothesis one step further to help explain the power of prayer, hands-on, and even long-distance, healing, Miller et al., proposed, based on Gariaev’s data, that it is “possible to suppose that photon fields, emitted by chromosomes as sign fields, can be teleported within or even outside the organism’s space.”(Miller, Miller and Webb, 2002)

The same may be said for wave photon fronts, which these investigators noted “were read from the chromosome continuum similar to reading from a multiplex hologram.”

Miller and colleagues found that photons were being trans-

formed into radio waves through the genome. The importance of this quantum nonlocality theory and observed genetic energy expression is “hard to overestimate” they said, further reporting:

We think that these wave fronts interact with, interpenetrate with, and interdetermine the physical substance that makes up the creature. According to the holographic model of reality, all the objects we can observe are three-dimensional images formed of standing and moving waves by electromagnetic and nuclear processes. . . . i.e. holograms. Just like a hologram encodes a 3-D image, the biohologram encodes and projects the blueprint of the human being, as well as other biological systems.

These investigators also reported that “the nervous system constitutes a coordination mechanism that integrates DNA projections of the rest of the cells in the system.” Moreover, the brain and nerve network “is first and foremost a coordination mechanism which aligns . . . cellular holograms.”(Gariaev, et al, 2001; Miller, Miller and Webb, 2002).

DNA and Nervous System Projected Reality

True to this advanced understanding, the nervous system, interestingly enough, has the highest percentage of operating DNA in the body. Estimates hold that approximately 10% of your DNA resides in your brain cells; mostly in your neuron nuclei. As mentioned earlier, the DNA of a particular cell is not always active. Miller et al., state that there may be as little as 1% of the DNA present in the nucleus of the cell acting most powerfully to determine the structure of that cell.

They further proposed, “the biohologram, projected by the brain, creates standing and moving electromagnetic wave patterns at different frequencies of the spectrum in order to effect different biochemical transformations.” They believe various frequencies, from low (radio waves) all the way up the spectrum into visible light and beyond, are involved in your nervous system’s electrogenetic bioholography.

Emphasizing the importance of sound waves, even music, in this bioacoustic-driven, nervous system mediated, bioholography, in 1973, Miller and Webb wrote about this subject Your form of cymatic expression precipitating bioholography “employs sound waves to create a movement on a surface that is used as the basis for creation of an optical hologram.” Essentially, they wrote, your chromosomes first resonate from, and then react to, *sound wave patterns emanating from objects in space*. Electro-genetic processes then convert these sound wave patterns into wave patterns of light that reconstruct the shape of that object in your mind and experience. Thus, you have a transformation taking place “between two levels of vibration, two media as it were, preserving a pattern in space.” (Miller and Webb, 1973).

Illustrating the metaphysics of electrogenetics in bioholography, Miller et al., examined your liver for example. They wrote that the special function of your liver cells “is created by the influence of the projection of the liver pattern on [your] DNA in the cells in the area where the liver is created.” They suggested an “important feedback mechanism” was activated when DNA expressed itself in a particular cell or tissue type, such as the liver. This expression actually *caused* that cell or tissue type to manifest as the physical biohologram projected by the DNA and compliant nervous system.

There is a great difference between this “electromagnetic phantom effect”—a most “fundamental phenomenon” available to explain other observed phantom effects—and the “often misinterpreted secondary emission of electrons seen in Kirlian Photography and dubbed ‘phantoms.’” Miller, et al., (1974) provided other examples of phenomena associated with this bioacoustic and electrogenetic reality-regulating mechanism, including [endogenous] bioluminescence, liquid crystal formations, and superconductivity occurring within living organisms.

In fact, according to Iona Miller, “bioluminescence can be considered an indicator of life activity. It is the emission of pho-

tons of light produced when energized electrons drop into a lower [energy] or ground state.” She used the firefly to illustrate a most common example of visible light generation sourced electrogenetically.

Considering the scope of this knowledge and its application throughout life, she explained, “photons from the sun excite electrons here on earth; this high energy state is transformed into high energy phosphate bonds by the process of photosynthesis; the release of the energy stored in these bonds is the fuel of life; electrons are transferred between molecules in a downward cascade fashion to lower energy states; this action produces the electric current that produces the motion that we call life.”(Miller, 1974)

But entities can also luminesce at higher frequencies than the normal visible spectrum, such as in the UV or microwave region. “It has been shown that the human being is an emitter of various electromagnetic radiations, Miller continued. “Different emissions correspond to different body structures across the emission spectrum. These electromagnetic radiations are of course indicative of the energy state of the organism, and can be indicative of the state of health.”(Miller, Miller and Webb, 2002)

Other research into consciousness (Childre, 1992; Paddison, 1992; King, 2001) suggests this is a non-localized function of the mindbody. Joseph Peace in his book, *The Biology of Transcendence: A Blueprint of the Human Spirit*, (2001) pointed out that you have at least five neural centers or “brains.” Your fourth, and most recently developed “brain,” is located in your head while the fifth one is located in your heart. Accordingly, Miller’s group reported this knowledge can be used to elucidate spiritual as well as species evolution. Joseph Peace declared you are, quite literally, made to transcend. He wrote, “Transcendence is our biological imperative, a state we have been moving toward for millennia.”

Table 12.1. Objectives of Energy Therapeutics

- 1) Remove impedances and neural blocks to energy mobilization, and reconnect energy pathways to facilitate coherent and harmonic flows through the use bioacoustic and electromagnetic natural treatments (e.g., sound, light/color, other frequency applications and neural therapies including prayer, acupuncture, Bach flowers, essential oils, homeopathics, etc.)
- 2) Correct DNA breaks and DNA repair mechanisms with the 528 Hz frequency (Horowitz, 1999) and gene support nutrients such as vitamin B12, B6, folic acid, cell therapy implants, gene repair extracts (e.g., *Dionaea muscipula* and Iridodial).
- 3) Improve cell signaling mechanisms (e.g., by way of glyconutrients).
- 4) Correct imbalances in intracellular minerals that are needed for maintenance of cell membrane capacitance and enzyme cofactors by utilizing mineral transporters.
- 5) Nutritional enzyme interventions that address any ECM-glycocalyx-cell membrane deficiencies.
- 6) Repair cell membranes and cell membrane potentials with proper selections of fats, sterols, phytosterols, AEP, and mineral transporters.
- 7) Improve macromolecular production, utilization and secretion of proteins (enzymes and structural proteins), peptides (hormones, growth factors, growth inhibitors and cytokines), and lipids and carbohydrates (energy sources and signaling molecules).
- 8) Improve intracellular energy production with vitamins, carnitine, co-Q10, and intracellular mineral transporters.
- 9) Correct pH and associated energy alterations with select nutrition and water intake.
- 10) Facilitate antioxidant functions.
- 11) Facilitate detoxification of the ECM and intracellular compartments.

Metaphysically, according to Far Eastern teachings, “we emerge through self-organization from the Void and to the Void we can return for renewal and sustenance. It is, in fact the *Heart Sutra* that informs us that ‘Form is not other than Void; Void is not other than Form.’ Our human form is not other than this void, and biophysics now demonstrates this quantitatively and qualitatively.”(Miller, Miller and Webb, 2002)

“We are more fundamentally electromagnetic rather than chemical beings,” Miller et al., reiterated. The void state, ‘cosmic zero,’ is the primal matrix and proportionately our most fundamental reality. In essence, we emerge from pre-geometrically structured nothingness, and DNA is the projector of that field which sets up the stress gradients in the vacuum (or ‘quantum foam’) to initiate that process of embryonic holography.

The holographic paradigm is one of reciprocal enfolding and unfolding of patterns of information. All of the potential information about the universe is holographically encoded in the spectrum of frequency patterns that constantly bombard us.”(Miller, Miller and Webb, 2002)

This paradigm also influences, if not controls, elements of social interaction as a function of electrogenetic expression. Miller’s group challenged you to consider “the self-organizing emergent function of the ‘rippling’ effects of immense numbers of crisscrossing interference waves,” emanating from individual bioholograms. This makes “mutually interactive, or reciprocal, holographic projections of holographic projections.”

Your DNA projects your psychophysical self; then, likewise, your different brain centers and nervous system “mathematically construct objective reality by interpreting frequencies that are ultimately projections from another dimension—a deeper order of existence that is beyond both space and time. . . .” Your brain is “a hologram enfolded in a holographic universe,” (Talbot, 1991)

Origin of Life & Consciousness

Researchers have determined that at the instant a woman ovulates, there is a quantifiable shift in her electromagnetic fields. The follicular membrane bursts and an electromagnetically potentiated egg descends through the energetically alerted fallopian tube. Fertilization is also an energetic (i.e., spiritual) process. The sperm is negative with respect to the positively charged egg. When these two potent spiritual projections unite, the membrane around the egg becomes hyperpolarized. Thus, other sperm are excluded from this intimate, Divinely-driven, union. At this instant, the bioacoustic/electromagnetic human entity begins life with all the programming necessary to fulfill its destiny.

“The biohologram begins to function at conception and ceases only at death,” Miller et al., contended. “The DNA at the center of each cell creates the multicellular creature hologram by expressing the DNA in the center of the cells. The biohologram projected by the embryonic nervous system forms *a three-dimensional pattern of resonant structures*. These include points, lines, and planes that electromagnetically behave as the acoustic wavethe ‘material waves of the drumhead,’ acting as field guides to flowing matter and energy.”[Emphasis added.](Miller, Miller and Webb, 2002)

“In the beginning, there was the *word!*” Regarding the DNA wave-operated human biocomputer, besides the reference to genetic “texts” discussed above, Gariaev’s group proposed: (1) that the biopotent chromosome apparatus acts simultaneously both as a source and receiver of these genetic texts, respectively decoding and encoding them. In this way, Dr. Horowitz believes, DNA’s genetic expression is self-actualizing; and (2) the chromosome continuum acts like a dynamic holographic grating system, to display or transduce weak laser light and solitonic electroacoustic fields. According to Miller et. al., “the distribution of the

character frequency in genetic texts is fractal, so the nucleotides of DNA molecules are able to form holographic pre-images of biostructures.”(Miller, Miller and Webb, 2002)

In other words, to reiterate and summarize Gariaev’s findings and conclusions:

1. the genome has a capacity for quasi-consciousness so that DNA “words” produce and help in the recognition of “semantically meaningful phrases;”

2. the DNA of chromosomes control fundamental programs of life in a dual way: as chemical matrixes and as a source of wave function and holographic memory (projection); and

3. processes in the substance-wave structures of the genome can be observed and recorded through the dispersion and absorption of a bipolar laser beam.

“This process of ‘reading and writing’ the very matter of our being manifests from the genome’s associative holographic memory in conjunction with its quantum nonlocality, Miller’s group concluded. “Rapid transmission of genetic information and gene-expression unite the organism as a holistic entity embedded in the larger [environmental/universal] Whole.”

Relatedly, mystics have often called the sacred, all pervasive, creative sourcing sound, “logos” or word, the “Audible Life Stream.”(Blavatsky, 1987; Hines, 1996). Holy persons said that the light and sound are one. Thus, this holographic concept, the beginning of life and consciousness, might alternatively be called your Divine essence. It is the part of you that speaks to our Oneness or Unity with the rest of the universe.

“God created man in His image.” DNA creates the bioholographic dynamics from which your creationistic energy fields precipitate your matter. Pribram (1991) proposed a neural holographic process of creating life wherein images are reconstructed when their bioacoustic and associated electromagnetic representations, in the form of distributed data within neurologic information systems, are appropriately engaged. “These repre-

sentations,” according to Miller et al., (2002) “operate as filters or screens. The temporal organization of cortical columns and the arrival of impulses at neuronal junctions converge from at least two sources, forming interference patterns. These patterns are made up of classical postsynaptic potentials, coordinated with awareness. This microstructure of slow energy potentials is accurately described by the equations that describe the holographic process.”(Pribram, 1991; Miller et al., 2002)

On Fractals and Disease

Input to your brain is distributed, *fractally*, over your entire nervous system. “In the bodymind, information is also holographically distributed, each ‘part’ having, more or less, information about the whole organism. . . . Chaotic dynamics are part of this image-forming process. There is order even in disorder. There is order, manageable chaos (fractals) and unmanageable chaos. . . .

“The word *fractal* comes from the Latin *fractus*, which mean broken or fragmented. Fractals delineate a whole new way of thinking about structure and form—even forms of dis-ease, which take root organically in the body and psyche.” All of life is creatively inclined to be expressed fractally in bioenergetic systems.(Miller, Miller and Webb, 2002)

Like holograms, if you magnify fractals multiple times to expose greater details, hidden details emerge from their infinitely embedded structures. However, “the same self-similar patterns repeat, over and over, no matter what level you care to examine. You look closer and closer and still see the same form. A single image is infinitely reiterated. Thus, a wealth of structure emerges from simplicity. So, too, the dis-ease process can be seen at the physical, emotional, mental, and spiritual levels.” Disease too is based on repeating patterns of altered and/or aberrant behavior at all levels.(Miller, Miller and Webb, 2002)

Swinney (1999) clarified this profound, albeit technical, thesis brilliantly in the following paragraph:

At the most fundamental level of your individual being, you too, your body and your psyche is part of the interference patterns caused by the interaction of consciousness and wave fronts arising from fields of infinite possibility. You then must also operate by holographic principles, . . . Your internal perception of this reality is itself a hologram in your brain. It is the means of perception that gives the universe its apparent forms and solidity. It is also this holographic perception that influences the dynamics of your brain's and your body's chemistry, your self-hologram. In this perceptual hologram resides the fundamental basis of your structure and your sense of self and external environment, including your health and illness in both your physiological and psychological being. Your disease structures are incorporated within it. It is here, at this level of your being where fundamental healing and physical-psychic restructuring occur. This hologram is what I have termed the primal existential sensory self-image or existential hologram. . . Your sense of self is a holographic, existential, multisensory image." (Swinney, 1999).

Thus, your enlightened appreciation of yourself—your human biocomputer—must now integrate new understandings of electrogenetics, bioacoustics, forms of DNA memory, the energized chromosomal self-projection/self-actualizing apparatus, and the aforementioned electromagnetic mechanisms for recording, storing, transducing, and transmitting genetic information simultaneously, spiritually and physically.

Advanced Genetics and the Biohologram Field Theory

Technically, this section dealing with advanced quantum genetics, and the biomechanics of creative consciousness, is necessarily complex. It is provided courtesy of Iona Miller, et al., and was written for advanced investigators. Lay readers, and novice DNA enthusiasts, might advance to the next section without losing sleep.

Before you jump ahead, however, this is extraordinary work. Despite its technical complexity, a discussion regarding the quantum biophysics of creative consciousness is respectfully included for your intelligence and spiritual advancement. The following subtext largely explains the mechanisms through which spiritual control over DNA is exercised. In fact, Miller et al.'s contribution may best explain creationism in general, as a volitional process.

Miller et al., wrote that “a liquid crystal in a cell, *through its own structure*, becomes a proto-organ for mechanical and electrical activity.”

This means that when liquid crystals are associated with specialized cells in higher animals, they give rise to “true organs such as muscles and nerves.” Recognizing that you are mostly composed of liquid crystals, these researchers additionally explained this phenomenon, drawing upon early works by Needham (1936), Bernal (1933) Northrop (1935) and others. Here is their fascinating, albeit complex, discussion:

The oriented molecules in liquid crystals furnish an ideal medium for catalytic action, particularly of the complex type needed to account for growth and reproduction. A liquid crystal has the possibility of [developing] its own structure through singular lines, rods, and cones, etc. Such structures belong to the liquid crystal as a unit, and not to its molecules, which may be replaced by other molecules without destroying the composite structures, and these persist in spite of the complete fluidity of the substance.

In 1933, Bernal helped advance Burr and Northrop's (1935) macro-atomic theory which postulated two aspects to reality—the field and the particle. They associated the field with what they termed the macroscopic aspect, and the electron with the particle. The particle is associated with movement. The structure of biological material seemed to be associated with the field aspect. Electric fields, they noted, caused polarizations of macromolecules in solution due to the fact that the molecules possessed dipole moments, and associated altered positions of protons in the molecules. Such actions can affect the relative stability of different possible configurations of the macromolecules, they theorized. The field affects the degree of structure present in the solution.

Fig. 12.3. Form Follows Creationism



Contrary to years of now disproven pseudo-scientific consensus, **form does not follow function!** It follows *creationism*—bioacoustic followed by electromagnetic precipitation and structural animation. Sound and electrical frequency patterns interacting with DNA encoded structure, including biofields, L-fields, electrodynamic fields, or morphogenic fields. These are terms for the *biophysical theory* that living organisms are organized by fields. This theory, which makes much more rational sense than the doctrine preached in medical schools and science classes—that your physical structures simply respond to mechanical forces applied by muscles affecting the bones, for example—refers to the concept that electromagnetic fields organize embryological development and guide the processes of regulation, repair, and regeneration.

Shown above is Dr. Horowitz's eldest daughter, Alena, on Lake Pend Oreille, in northern Idaho, one early winter morning. Following a still night, with no precipitation, the frozen surface water suddenly grew endless fern-shaped crystals all oriented, as shown on the opposite page, towards the tracking sun. These forms did not follow a precipitating *function*, and no known function was served by them. Yet, they were miraculously created in response to some unseen geomagnetic, solar, and/or universal force acting on the water.

Electromagnetic fields (EMFs), and theories concerning them, help explain this natural phenomenon. Such forces help to establish the matrix that shapes our world and regulates every organism on earth.

Inherent in the concept of a biofield, is that the organism responds to oscillating fields external to the body and emits oscillations (acoustical and electromagnetic) that can be measured.

Health could be defined as coherence of coupled oscillations

Fig. 12.3. Continued



and balance in the flow of energy.

Treatment could be defined as identifying and returning stuck, isolated, pathological repeating cycles in the organism back to a state of energetic balance.

To detect and correct imbalances in the biofield, methods of choice include: hands on healing; prayer; photonic devices; meditation; EDS devices; Qi Gong; acupuncture; homeopathics; flower essences; herabl extracts; essential oils; Tai Chi; neural therapy; microcurrent devices; and frequency delivery appliances, that Dr. Horowitz humorously refers to as the "FDA." Each of these imparts its unique benefits through subtle energy frequencies delivered as per therapeutic indication.

All of these methods and materials attempt to rectify or prompt self assembly, and accomplish this by influencing biofields—the organizational property of biological molecules. From here, small components join together to form larger and larger structures of increasing complexity that have new properties that are different from the individual parts. Yet, the whole is greater than the sum of the parts.

The self-organization (i.e., energetically-directed auto-organization) of molecular and cellular structures is a spontaneous process that takes place when chemical and electromagnetic conditions support assembly. Nédélec and associates have shown that homogeneous solutions of the protein tubulin mixed with the protein kinesin and an ATP solution, as an energy source, will undergo spontaneous self-organization.

Photos courtesy of Leonard G. Horowitz.

A constant magnetic field can, in principle, affect the various processes in biological objects. Three possible mechanisms for this biomagnetic affect are: (1) the orientation of diamagnetic or paramagnetic molecules by the magnetic field; (2) distortions of the angles in the molecules; and (3) orientation of the spins of molecules in a magnetic field (Fowler and Bernal, 1933; Freedericks and Zolina, 1933; Van Iterson, 1933; Osborne, Ambrose and Stuart, 1970).

Presman (1970) postulated that such electromagnetic fields normally serve as conveyors of information, from the environment to the organism, within the organism, and among organisms. He suggested that organisms employ these fields in conjunction with the well known sensory, nervous, and endocrine systems, in effecting coordination and integration.

In 1970, Muses proposed the possibility of unit impulse functions evolving from the Gaussian wave packets. His work traced the relation of that mathematical concept to quantum biological indeterminacy in terms of a process of the modulation of random fluctuations by target-seeking perturbations which points the way to the understanding and computing of the parameters of volitional experience in quantum biological terms. He maintained that we are dealing with Gaussian wave packets, put to use in terms of a close-range reaction; in turn resulting in the resonant microbiological specificity (arising from the relatively large number of specific molecular parameters) necessary to the essential life and evolutionary processes of chromosome synapses, replication, and mutagenesis.

Muses held that inherently indeterminate processes may be biologically used in achieving determinate ones such as our repeatable and commonly accepted volitional experiences of effort and direction. The range of quantum indeterminate fluctuation of biological efficacy is in the far ultraviolet, and it is in this spectral region that we should expect to look for any modulation effects on Gaussian wave packets by volitional energies manifesting as ultramicrobiological field perturbations.

Biologically, there is a threshold of non-randomicity below which peaks tend to emerge that are sharp enough to possess biodirectiveness in an enzyme-guiding sense. Random

biological quantum energies which are physiologically unassigned are the clue to psychosomatic directing, which can be beneficial or deleterious to the organism. Muses (1970) described the mechanism of this effect as a microbiolaser type process.

Heisenberg explored the possible relevance of the quantum indeterminacy of elementary particles for biological systems, especially human systems (discussed in Koestler, 1972). He stated that there are two places in the human system where the quantum indeterminacy of a single particle can have a profound influence. The first important effect is that of mutation in the genetic code. The second important influence is the alteration of the behavior of neurons during human thought processes.

Tien (1969) conceptualized mind as mass in relative motion and brain as energy or relative electrical charges in motion, like electrons bombarding a television screen. Personality is seen as a time series of scintillating frames of consciousness. Personality becomes a reverberating input-output pattern of self-creation, seeking information or patterns of energy from the environment as well as from its own memories. The stability of any given personality, of its identity, is maintained by feedback upon the principle of most similarity.

The personality never recreates itself, but creates only a close approximation which is accepted due to the principle of constancy (as being the same). The phenomena of unique individuality, and personal continuity, depend on memory, of which consciousness is the most recent and, thereby, the most subject to erasure and loosening. Personality transformation becomes energy pattern modification of not only scintillating consciousness but also of recent circulating memories and older stored memories of childhood.

According to the holographic model of reality, all the objects we can observe are three-dimensional images formed of standing and moving waves by electromagnetic and nuclear processes. All the objects of our world are three-dimensional images formed electromagnetically, i.e., holograms.

This concept and the models of human information processing, based on the hologram, throw interesting light on the philosophical tradition which holds that the world of objects is an illusion. With the triumph of relativity and quantum physics, the interpenetration of the philosophical and the scientific is [now] possible.

LeShan (1969) observed, in discussing some individuals who purportedly experience psycho-energetic phenomena, that their view of the universe as a great thought of which they are a part is quite similar to many physicists' view that they see reality only in their own mental image.

Miller et al., proposed that the "reality hologram," which appears as a stable world of material objects, is the elementary particle which has a long-term existence and fairly simple rules of interaction. They also proposed the existence of a "biohologram" which appears as mobile and evolving, through the DNA molecule. This "biohologram" projects a dynamic three-dimensional image that serves as a guiding matrix for the manipulation and organization of the "reality hologram." (Miller, Webb, Dickson, 1973).

Thus, much like the 1930s molecular discoveries in liquid crystal creationism and self-replication/determination methods mentioned above, Miller et al., concluded that you have mobile self-organizing holograms moving through a relatively static simpler hologram. Impacting the actuality of your spirituality, the possibility exists that such "bioholograms" could achieve sufficient coherence to continue existence as a pattern of radiant energy apart from a material substrate. These and other scientists feel that such an occurrence could form the scientific basis of such psychoenergetic phenomena as psychokinesis, clairvoyance, telepathy, and precognition. [Editor's note: Dr. Horowitz believes this materially independent radiant (spiritual) energy phenomenon additionally supports the alternative theory of genetic memory versus reincarnation advanced earlier.]

The Millers and Webb continued:

Quantum holography asserts that DNA satisfies the principle of computer construction as defined by Von Neumann (1966). It carries a copy of itself, and is its own blueprint. It is written in the genetic texts where the mechanism engineering DNA replication is the biophotonic electromagnetic field; while the “letters” of the genetic texts, A, G, C, U are held invariant. In replicating the organism, the blueprint creates the “acoustic field” which mechanically constructs/engineers the organism out of the available matter, in accordance with the information held in the electromagnetic field holograms.

Both quantum entanglement and, therefore, quantum teleportation can be related to quantum holography, through solitons, resonance effects, and superconductivity.

Experimental evidence confirms that the mutual recognition of one DNA antiparallel half chain (+) by the other (-) concerns special super persistent/resonant acoustic-electromagnetic waves or solitons. DNA solitons express two types of memory which concern the capability of nonlinear systems to remember initial modes of energisation, and to periodically repeat them.(Dubois, 1992) The DNA liquid crystals within the chromosome structure form such a nonlinear system. The DNA-continuum is quasi-holographic/fractal, and relates, as is the case for any hologram or fractal, to the fundamental property of biosystems—that is, their ability to restore the whole out of the part.

DNA solitary waves (solitons), and in particular, the nucleotide waves of oscillatory rotation, “read” the genome’s sign patterns, so that such sign vibratory dynamics may be considered as one of many genomic, nonlinear, dynamic, semeiotic processes. The key parameter of such patterns is fractality. It can, therefore, be hypothesized that the grammar of genetic texts is a special case of the general grammar of all human languages. We can realize the wave-coding capabilities of the matter-wave sign functions of DNA as true wave control capabilities, facilitated in an aqueous solution, acting as a liquid-crystal condition. The living cell is a computer based on DNA.

The genome has been identified as an active “laser-like” environment. Yet, this approach to DNA-wave biocompu-

tation means entering into new semeiotic areas of the human genome and the biosphere in general. These are the areas which are used by Nature to create humankind. The quasi-speech of chromosomes of all organisms concerns semantic exobiological influences wherein DNA acts as a kind of aerial open to the reception of internal influences and changes within the organism as well as those outside it. This extends beyond it to the extent of the entire universe through complex fractal embedding and nonlocality.

Creation of biocomputers can be based on these totally new principles of DNA-wave biocomputation, which use quantum teleportation.(Sudbury, 1997). Experiments show that DNA, considered as a liquid-crystal gel-like state, reveals a periodically reoccurring pattern which acts on the incoming light in the manner of a solitonic lattice. What could such an action achieve?

A soliton is an ultra stable wave train often with a seemingly simple closed shape, which can arise in the context of nonlinear wave oscillations. Really, it consists of a rather complexly interrelated assembly of sub-wave structures. These keep the whole solitonic process in a stationary state over a comparatively long time. The soliton is neither a particle nor wave in much the same way a quantum is characterized by wave-particle duality. It is a means to carry information. It probably reads the codons, as a traveling "window" that opens in the double helix structure as the reading takes place. In this model the reading process is a complex mechanical oscillator,(Gariaev, 1994) capable of producing solitonic wave transmissions, which take the form of a system of rotary pendulums.

DNA forms such pendulums in this model which are simulated as a chain of nonlinear oscillators. The window, as it travels, is highly context dependent on the actual layout of the elements as specified by the actual genetic code sequence involved. Complex dynamic patterns arise in the nonlinear covalent connections between nucleotides. Oscillatory activities are located somewhere together in the "acoustic" wave domain.

As a liquid crystal, DNA probably influences the polarization of the weak light emission known to exist in cells, as so-called biophotons. Such biophotonic mitogenic radiation, or mitogenic light, while being ultraweak, is yet highly coherent. It has an inherent laser-like quality. Endogenous intracellular coherent light is emitted by the DNA molecule itself.

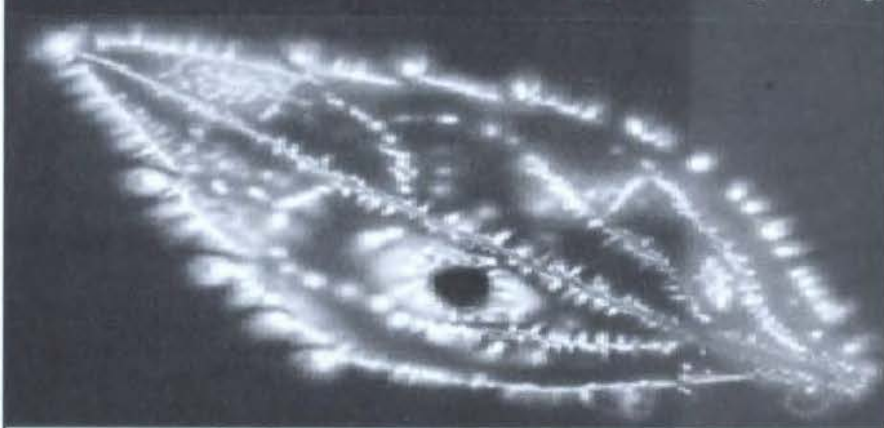
The superposed coherent waves of different types in the cells are interacting to form diffraction patterns, first in the “acoustic” domain and then in the electromagnetic domain. This is a kind of quantum hologram. Interactions of solitonic oscillations in the liquid crystal structure of DNA, and the polarization vector of the ultraweak biophotonic highly coherent light, could be understood as a mechanism of translation between holograms in the “acoustic” frequency domain of short range effects and those in the electromagnetic domain, and vice versa.

Quantum holography has been used to predict the workings of MRI.(Schempp, 1992,1998) The DNA-wave biocomputer model is also in agreement with the qubit model explanation of DNA.

In the quantum holographic DNA-wave biocomputer theory, DNA is a self-calibrating antenna working by phase conjugate adaptive resonance capable of both receiving and transmitting quantum holographic information stored in the form of diffraction patterns—quantum holograms. The model describes how during the development of an embryo of the DNA’s organism, these holographic patterns carry the essential holographic information necessary for that development.

The quantum holographic theory requires that the DNA consists of two antiparallel (phase conjugate) helices, between which are located hologram planes/holographic gratings, where the necessary 3 spatial dimensional holographic image data of the organism is stored. Endogenous laser illumination can be expected to turn the DNA into a series of active adaptive phase conjugate mirrors/holographic transducers. A beam of radiation resonantly emerges on which is carried the holographic information as encoded in the DNA. This confirms the quantum holographic prediction that DNA func-

Fig. 12.4. Visible Life Energy Photography



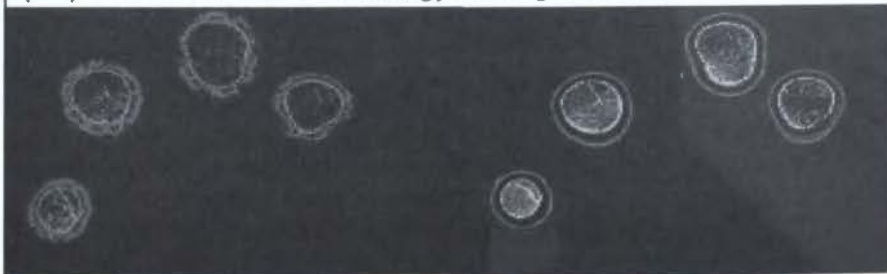
Healthy ecosystems (e.g., forests) and healthy organisms emit a wide range of acoustical and electromagnetic frequencies—a broad spectrum of energies. Unhealthy organisms and ecosystems have frequency emission imbalances wherein some frequencies are transmitted in excess or insufficiently leaving holes in emission spectra of electromagnetic and/or bioacoustical energies. Although the above photograph, taken using a Kirlian camera, reveals of a healthy “aura,” or bioluminescence, emanating from a leaf, it fails to record more subtle or quantum energies affecting life’s fundamental subspace terrain.

It is now known that sick individuals commonly show certain emission bands with either excessive or deficient energies. Where they have deficiencies, holes in their visible auras can be seen by gifted persons, or photographed with such light sensitive instruments.

Energy deficient persons will be naturally or intuitively attracted to a balancing energy source. Relatedly, one reason you may feel uncomfortable being around sick, unhappy, and/or “negative” people is that you intuitively perceive being resonantly drained of energy. Such statements as “You put off bad vibes,” actually points to a physical (electromagnetic) mechanism of energy transfer.

Individuals, various geometric structures such as pyramids, and even geographical locations with different minerals, crystalline rock structures, natural magnetic forces, and/or man-made electrical appliances, all emit different energy frequencies.

The Kirlian fingertip photos below are of the same person before (left) and after a hands-on energy healing treatment.



tions as an antenna capable of both encoding and decoding holographic information.

We can also model the quantum holography of the neuron. This model is in good accord with the biological neuron's information processing morphology and signal dynamics. This is the quantum holographic model of the brain as a conscious system. We can incorporate signal theory into quantum physics through the concept of the pilot wave or radar.

Quantum holography predicts polarized or orthogonally rotated holograms encoded on a "paged" associative holographic memory. Sharp frequency adaptive coupling conditions specify very narrow spectral windows, i.e. the "pages." "Magic windows" are a naturally tuned frequency of a good hyperchannel between orthogonal frames where scalar wave anenergies crosstalk readily. They are frequency dependent interdimensional nodal points. Some magic windows are 38-40 lHz; 150-160 kHz; 1.1-1.3 MHz; 1.057 (Lambshift) and the near ultraviolet (life energy frequency).(Beardon, 1988)

Described in terms of tensor multiplication, the orthogonality condition can be seen as specifying a set of diagonal elements, which traces in a unit matrix in the frequency domain. The planes on which the base pairing takes place concerns two quantum holograms. The tensor operation, in quantum holography, describes a quantum entanglement. . . . (Miller, Miller and Webb, 2002)

Immediate-Early Genes (IEGs) and a New Hypothesis on Healing

Now that you have been thoroughly excited, or otherwise confused, by the Miller group, before transiting to the superior use of acoustic sound waves and bioholography by dolphins to effect healing, consider the related work of Ernest Rossi.(1999; 2002) Dr. Rossi developed an important creativity hypothesis that deserves discussion.

You have already learned (particularly if you read Miller et

al.'s, brilliant contribution reprinted above), that your mind produces resonating wave patterns of thought, and through DNA and bioholographic phenomena, these have a virtually instantaneous impact on your physical, emotional, and spiritual state as well as health status.

Rossi's work focuses on this—the psychobiology of healing. Rather than visiting your medical physician for the latest sexual stimulant, chemical laxative, or acid stomach retardant, consider what Rossi recommended. He began: "Enriching life experiences that evoke psychobiological arousal with positive fascination and focused attention during creative moments of art, music, dance, drama, humor, spirituality, awe, joy, expectation, and social rituals can evoke immediate early gene protein cascades to optimize brain growth, mindbody communication, and healing."

According to Rossi (1999) "[The] psychotherapeutic approach can contribute to psychobiological arousal, enrichment, and relaxation; it may be possible to help people find optimal levels of mental stimulation to facilitate actual growth in the hippocampus of their brain to encode new memory, [expanded] learning, and [preventive] behavior...optimizing psychobiological growth and healing."

Rossi (1999) described an electrogenetic mind/body communication pathway that is important in that it may explain another way that healing appears to rely on the "neural plasticity" discussed by Miller, et. al, and rapid eye movements, or REM. He described how immediate-early genes, partially created by thought, also called "Primary Response Genes" or "third messengers," play a pivotal role in the bioelectric dynamics of waking, sleeping, dreaming, and mindbody healing. (Miller, Miller and Webb, 2002)

According to Rossi (1999), a type of genetic material exists that is neurologically linked to sleep patterns, REM, dreaming and even healing. These are called immediate-early genes, or

IEGs. These manifestations of electrogenetics and bioholography “function as mediators of information transduction between psychological experience, behavioral states, and gene expression. A wide range of behavioral state-related gene expression (from relaxation, hypnosis, and sleep, to high arousal, performance, stress, and trauma) culminate in the production of new proteins or homeostasis—physical and psychosocial adaptation.”

“Behavioral states modulate certain patterns of gene expression,” reported Miller et al., (2002) “Interaction between the genetic and behavioral levels is a two way street. Genes and behavior are related in cybernetic loops of mindbody communication.” Thus, watching commercial television, for example, is more than a form of behavioral engineering. It is a form of genetic engineering as advertisers seek to persuade certain purchasing behaviors that are intimately linked to your genetic makeup, specifically IEGs.

Miller’s team provided another example. “How does this relate to manic depression,” and appropriate treatment planning?

Rossi considers bipolar disorder one of numerous ailments involving several biological systems largely influenced by IEGs. These behaviorally linked genes, he attests, are expressed continually. They respond to hormone messenger molecules. These mediate adaptation to extracellular signals and environmental stimuli including temperature, food, sexual cues, psychosocial stress, physical trauma, and toxins. (Rossi, 1986; 1999; 2002; Miller, Miller and Webb, 2002)

In Miller et al.’s, view, “There are persistent alterations in IEG expression in the process of adaptive behavior on all levels from the sexual and emotional to the cognitive. They can transduce relatively brief signals from the environment into enduring changes in the physical structure of the developing nervous system.” Your nervous system’s “plasticity,” or its ability to adapt and/or evolve, involving memory and learning throughout life, also largely depends on IEGs and their expressions.

If, therefore, “external cues can modulate cell function through regulation of gene expression,” Miller et. al., reported, “this could also be true for internal cues” including thoughts, feelings, imaginings, intuitive experiences, and dreams.

According to Rossi and Cheek (1988), IEGs are also fundamental in the regulation of REM-on and off neurons, and neuronal networks associated with REM sleep and dreaming. This makes them molecular modulators of mind, emotions, learning, and behavior.

In addition, IEGs influence biorhythms involved in the natural healing, and circadian and ultradian rhythms of the body in general. [Editor’s note: Ultradian rhythms are those shy of 24-hour circadian rhythms.](Rossi; Cheek, 1988).

Milton Erickson discovered that his therapy sessions usually took from one and a half to two hours to come to natural closure. Later it was discovered that this delineates the natural work cycle that is harmonious with our own internal rhythms. IEGs modulate these cycles. This ultradian time frame is related to the activation, or deactivation, of specific genes whose expression can occur in a matter of hours or even minutes. Thus, the “Ah Hah,” or breakthrough experience gained using various psychotherapies can be life changing, and even spiritually evolving, ONLY as it involves this proven form of IEG expression.

Consistent with this premise, Rossi (1999) wrote, “Most arousing environmental stimuli that have been studied can induce immediate-early genes within minutes, their concentrations typically peak within fifteen to twenty minutes and their effects are usually over within an hour or two. These time parameter IEG expressions, and their ultimate translation into the formation of new proteins, correspond to the parameters of a complete work cycle of mindbody communication and healing. The changes in gene transcription and new protein formation initiated in this time frame, however, can lead to lasting changes in the central

nervous system by converting short term memory to long lasting learning through the process of long term potentiation . . . the activation or deactivation of the expression of specific genes [that] can occur in a matter of hours or even minutes.”

Rossi also advanced a “Dream-Protein Hypothesis,” that claims “new experience is encoded by means of protein synthesis in brain tissue . . . [Similarly,] dreaming is a process of psychophysiological growth that involves the synthesis or modification of protein structures in the brain that serve as the organic basis for new developments in the personality . . . ”

Miller et. al., (2002) offered this amplification of Rossi’s work as it relates to stress, coping, and general human enrichment:

Enriched internal and external environments leads to the growth and development of new cells. IEG cascades lead to the formation of new proteins and neurons along with increased synapses and dendrites that encode memory and learning. On the other hand, excessive trauma and psychosocial stress can lead to suppression of growth processes in the brain. When psychotherapy contributes to arousal, enrichment, and relaxation, it facilitates actual growth in the brain to encode new memory, learning, and behavior, optimizing growth and healing.

Rossi concluded that the essential dynamics of genetic expression, especially the mechanisms involved in forming the human brain and body during embryonic and fetal development, continue throughout life.

Dolphin Model for Electrogenetic Bioacoustic Therapies

American scientist, Dr. Michael Hyson, has also made a unique and important contribution to the fields of bioacoustic and genetic research. His work in pioneering and analyzing “dolphin therapy,” provides a sobering reality check on how far behind these ocean mammals human healthcare remains. The truth appears to be that dolphins (and whales) are probably the most ge-

netically advanced organisms on the planet, and unlike humans, their communication skills and general behavior reflects super intelligence.

As a young child, Dr. Hyson dreamed of working with dolphins. In pursuing his Ph.D. in biochemistry, he studied various fields of science and methods of healing that integrated the extraordinary means by which dolphins communicate and, on occasion, have been observed to prompt miraculous healings in humans.

His research initially focused on the pioneering works by medical physician John Lilly. According to Dr. Lilly and his collaborators, dolphins exercise far more conscious control over electrogenetic “hypercommunications” through their marine environment, and even through energetic subspace, than do humans on land. Remember, water, especially mineral rich ocean water, is a far better conductor of electricity and sound than is air used by humans to communicate (and even heal with oxygen).

Dr. Hyson called sea water “an exquisite electromagnetic and bioacoustically conductive medium.” In this environment, dolphins can dive to 1000 feet; sometimes jump 25 feet out of the water, stay submerged up to 20 minutes on one breath, and swim 18 knots/hr sustained with a top speed of about 35 knots. They have built in, high powered, sophisticated sono-electric systems that can do everything from stunning prey for food, to performing the most delicate behaviors ranging from mating to focused resonant therapy.

So that you never underestimate this amazing mammal’s capabilities, here are some additional facts:

If fossil dating is accurate, dolphins and whales have been operating with complete sonar systems and brains equal to, or larger than, ours for at least 15 million years, and perhaps as long as 30 million years—up to *three times* the evolutionary history of humans. Humans seem to be bent on periodic self-annihilation; not so, apparently, for these incredible sea beings.

The Cetacea, as dolphins are technically called, have formed a planet-spanning culture with multiple species, communicating globally, by acoustic, perhaps radio, and certainly genetic means. In fact, research proves that dolphins communicate in an “open” linguistic system with a *trillion* symbols from which to choose. English text is composed of merely 26 letter symbols. Which do you suppose might provide greater understanding?

Further, dolphins’ senses are *broader band* than yours. For example, their sound interval discrimination ability is 10 times better than a human’s. Their acoustic system brings in data at approximately 40 times the human rate at more than 10 times your frequency range. (Editor’s note: the maximum frequency heard by humans is ~20,000Hz; for dolphins it is ~200,000Hz or better.)

So when Dr. Hyson entered the water during his first dolphin study, he was faced with the humbling truth—that compared to his study subject, he was “almost blind, almost deaf, could hardly swim, had a smaller brain, and a shorter evolutionary history!” (Hyson, 2004)

From this experience, and having “inherited the Lilly/Truby/Morgane/ Bateson/Munson et al. tradition of dolphin research,” Dr. Hyson contributed the following summary sections pertaining to the electrogenetics of dolphin communication and sonic healing. “The Cetacea” he reported, “are increasingly coming to contact us. . . . Call it love they share with us, it is certainly their gift. I know it would bode well for humans to recognize the magnitude of this gift, and respond in kind.” (Hyson, 2004)

Empathy, Telepathy, and Telempathy

We know that touch, affection, and love can be deeply healing. Are these healing factors also bioenergetically mediated through subspace and DNA? Apparently so, considering the “phantom DNA effect” discovered by Gariaev et. al. (1995), and

related research detailed in the preceding sections. Dr. Hyson believes that DNA plays a crucial role in facilitating the deeply moving spiritual experience that many people report after communing with dolphins. Many who have gone swimming with dolphins have experienced profound psychological transformations, and even extraordinary healings. A strong connection to, and communication with, dolphins is obvious and best described as telepathic or telempathic. We have yet to know precisely how this works, Dr. Hyson reported. DNA is clearly involved. It is connected to affective states through the mindbody and nervous system, as Rossi (1999) determined, and plays a central role in these experiences.

Patricia Saint-John, for instance, communed with dolphins and had deep telepathic experiences with them. She was moved to work with autistic children based on what she learned. She found that by recreating the state of mind she had discovered while swimming with these marine mammals, she was able to telepathically connect with autistic children and had greater success building rapport, guiding improved behavior, and enhancing their communication skills.(Saint-John, 1991)

Dolphins routinely produce acoustic waves and electromagnetic fields capable of causing bioresonance and entrainment that science now proves are factors exquisitely involved in therapeutics and healing. Dr. Hyson discusses these topics in the following sections as he has applied them to developing models for dolphin-assisted therapies.

Resonance

All living systems have *natural frequencies* at which they prefer to vibrate. An external energy of the proper frequency, and with the proper timing or *phase*, and near a system's natural frequency, will cause the system to vibrate with, or *resonate* with, the external energy.

Simple examples of these physical laws include the common playground swing. To make a child swing in a larger arc, you must push it at just the right time or *phase*. This corresponds to the swing's natural frequency. Another one is two guitars. If a string on one guitar is plucked, the same string on the other guitar will vibrate, even if the guitars are many feet apart. Systems driven through resonance can absorb large amounts of energy. A soprano holding the resonant frequency of a crystal glass can transfer enough vibrational energy to the glass that it shatters.

Dr. Hyson once swam with a Floridian dolphin he named "Liberty." In the murky water he accidentally jammed his elbow into Liberty's blowhole area. It obviously hurt the dolphin. Liberty came around in front of the clumsy human, and at about 2 1/2 feet from Dr. Hyson's chest, began to put out a high intensity, fairly low frequency sound, probably less than a thousand Hz. First, at low power, the doctor could feel the water vibrate. Then his power increased as the water in front of Dr. Hyson's chest got warmer. Suddenly, Liberty increased power again and the doctor felt his chest wall get warm. Soon, with a change in frequency, "all my chest hairs were vibrating," Dr. Hyson wrote, "even in the water. It was so strong that my whole chest tickled with an intense buzz. Liberty stopped his sounds at this point, but he had relayed the distinct impression that he could do a lot more in self defense."

Entrainment

Entrainment has been defined by practitioners of Rife frequency therapeutics as “the tendency for two oscillating bodies to lock into phase so that they vibrate in harmony. It is also defined as a synchronization of two or more rhythmic cycles. Like resonance, the principle of entrainment is universal, appearing in chemistry, pharmacology, biology, psychology, sociology, astronomy, architecture, and more.”(Hyson, 2004)

When you are exposed to periodic signals, such as a sound, a light, or electrical signals, your body tends to track and match the core frequency and phase of the applied signal(s). For example, if you have ever sat before a computer’s video display monitor, or close to a television screen, long enough, the frenetic feeling you acquire and leave with is associated with the bioelectric entrainment of charged particles resonating with the pulsed energy of the electron beam and associated field energies emanating from the glass. This experience involves your billions of body cells. Slowly but surely your nuclei, charged membranes, and other cell components are influenced by, and tend to entrain with, the frequency of energy emitted by the computer monitor or television screen. Many people acquire a “buzzing” feeling and describe this as stressful or physically draining. This is also why people feel that bathing or showering following such radiation exposures is very refreshing. Immersion in water tends to neutralize the abnormal energy with more natural resonances and entrains your body to the vibration of the “universal solvent,” H₂O.

Also, another example occurs when you look at a light blinking at about 4 Hz. Your heart rate and electroencephalograph reading, or EEG and brain waves, will tend to match the rate of the light and shift more in syncope toward 4 Hz.

Thus, entrainment causes systems to vibrate more in phase, or move in synchrony. If the phase of two oscillations match, the most energy will transfer between them. If they do not, the weaker one will tend to attune to the stronger one.

Stephen Birch showed that entrainment of the human EEG occurred during and after swims with free dolphins. The EEG of the human subjects reduced in frequency and increased in power after swimming with these sea creatures. Again, this energy entrainment effect is mediated through DNA.(Hyson, 2004)

Phase Control, Sound Aiming, and Sound Cancellation

Using their phonators, dolphins can produce high intensity sounds ranging in frequency from about 500Hz to at least 280kHz (or perhaps as high as 1 MHz). Russian work has measured the peak output power as some 235 decibels (dBs), which means that dolphins are capable of sound pulses of about 1 kilowatt (kW) of acoustic power. That is roughly equal to 1 horsepower of pulsing sound!

The 4 phonators or “vocal cords” that dolphins use are under precise and *separate* control. One dolphin can make at least 4 simultaneous sounds that are all different; for example, 4 click tracks, 4 whistles, or any combination of clicks and whistles. This is illustrated in figure 12.4 which shows a schematic sonogram or “voiceprint” of sounds made by a bottlenosed dolphin (*Tursiops truncatus*). This shows the simultaneous production of three separate sounds.(Hyson, 2004)

If the peaks and valleys of two signals coincide, they are said to be “in phase.” Two signals in phase will reinforce each other and their power will add. Alternatively, two signals exactly out of phase will cancel each other. Thusly, dolphins control the *phase* or *anti-phase* of their sounds. Lilly and coworkers showed that dolphins use this phase control to steer their sound beams. Microphones were placed on either side of their blowholes. At times only one microphone picked up sounds while the other showed zero signals, adjustments being made to control phase. The same principle is used in phased array sonars and radars. Using this natural technology, dolphins aim sounds with their heads.

In additional experiments, hydrophones were placed on each side of dolphins' blowholes. This research showed that dolphins can produce stereophonic sounds or, alternatively, double separated sounds on two sides without coupling.

In another study, Lilly et al., picked up a whistle as recorded by *one* hydrophone (underwater microphone) that appeared to be made by one dolphin. However, the same signal was picked up by a second hydrophone. Analysis showed the whistle was made by *two* dolphins. One made the first part of the whistle and the second finished it. The transition between the two dolphins was *smooth and in phase*! This demonstrates amazing *phase control* and *phase locking* among dolphins.

So the dolphins, singly and in pods, are masters of phase control as well as resonance and entrainment.

Amazing Things Dolphins Can Do

Dolphins use their vocal talents to accomplish amazing things. Their range of communications reaches as much as 36 miles. If their 1kW of acoustic power were focused to a small point, the water would turn to steam, causing *cavitation*. This level of acoustic power focused on a fish could easily stun or kill it.

When dolphins use their sonar, they direct sounds toward a target and receive the returning echoes with their ears. Much like Miller et al., determined the bioacoustics and bioholographics associated with DNA expression, electrogenetically advanced dolphins may perceive an echo "image" from their sonars showing density differences in their targets, be they fish, boats, underwater terrain or a humans.

Soft tissues with densities near water conduct sounds well. For example, gas bubbles in your stomach reflect sound strongly. Your bones, being denser than water, also reflect strongly. For this same reason dolphins appear to have a sort of "acoustic X-ray image" capability. They may see us in the water, much like

Fig. 12.5. Dolphin Sonogram or “Voiceprint”



Schematic “voiceprint” made by a bottlenosed dolphin (*Tursiops truncatus*). This shows the simultaneous production of three separate sounds. The darkness of the graph proportionately reflects sound power. Clicks appear as vertical lines and whistles as horizontal traces. As you can see, the signals are simultaneous and complex.

Courtesy of Dr. Michael Hyson.

the images formed using medical ultrasound.

At frequencies of 280 kHz to 1 MHz, dolphins are able to sense quite small features, perhaps with resolutions under a millimeter (or less than the thickness of lead in a pencil). We know that they can detect and retrieve a 2mm diameter “BB” shot dropped in water at a range of 70 feet. Dolphins can also focus sounds into spots under a millimeter, and with 4-5 separate sound sources, potentially operating at the same time, imagine what they might be able to accomplish healthwise with acoustic wave resonances and interferences for therapy.

Regarding their bioacoustic healing capabilities, dolphins use what is called “time reversed acoustics.” In this technique, incoming sounds are recorded at several points and then played directly back to its source, but *amplified*. Such techniques have been used to break up kidney stones.

Dolphin anatomy lends itself to amazing sound capabilities. Consider the complexity of the 3-D sound fields the dolphins sometimes create in groups with each dolphin producing up to four sounds simultaneously, while maintaining tight phase locking among themselves. With four phonators, plus a 130 kilohertz signal from their jaws, dolphins can, like focused lasers, remove bone spurs, and perform sonic surgery using their ability to cause bioacoustic cavitations in small regions.

Vortex Ring Production

One extraordinary example of dolphins' sonic expertise are bubble rings. Dolphins blow bubble rings, then make them larger or smaller. Ring sizes range from about the thickness of a straw, to one to two feet in diameter. The rings stay submerged instead of rising to the surface! Dolphins play with the rings, moving them around sonically, and ultrasonically, appearing to play with them using their rostrums. They have been observed bouncing rings off walls, or elongating them with a flick of their dorsal fins into fifteen foot *spirals*. When they stop using their sound wave controls, the rings rapidly break up and disperse or float to the surface.

Another bioacoustic phenomenon is that such vortex rings can contain and transport acoustic energy over long distances. Sound vortices account for the tightly focused, highly powerful sounds the dolphins make.

Dolphin Ultrasound, Sonochemistry, and DNA

High frequency sounds made by dolphins can also cause the same effects as medical ultrasound, such as *microbubble formation*.

Bubbles that dolphins produce are also cavities. When bubbles collapse the steam inside them gets heated to almost 6000 degrees Fahrenheit. That's nearly the temperature at the sun's

surface! At such temperatures, novel chemical reactions occur. This field of study is called *sonochemistry*. (Suslick, 1999) and relates naturally, as you will learn below, to dolphins use of genetic regulatory mechanisms.

These effects include sonoluminescence, wherein light energy radiates due to sound. For example, some dolphins were observed causing a strange blue light to come from breaking bubbles. This occurred following acoustic stimulation of the bubbles at about 30 kHz. This sonoluminescent light had a unique color spectrum.

Dr. Hyson speculates, along the same lines as Smith and Best (1989), that dolphins may even be able to generate fusion events using sound and bubbles.

Dolphins are also masters of ultrasound. Suslick (1999) generally explained ultrasound's influence on bone healing and genetic expression thusly:

[R]ecent reports demonstrate that ultrasound affects enzyme activity and possibly gene regulation [These data suggest]. . . a probable molecular mechanism of ultrasound's nonthermal therapeutic action. The frequency resonance hypothesis describes possible biological mechanisms that may alter protein function. Ultrasonic absorption may...modify...[a protein's] 3-dimensional structure ...and alter [its] functional activity. Second, the resonance or shearing [caused by] the wave ... may dissociate a multimolecular complex, thereby disrupting the complex's function [thus, shutting down certain genes]. (Suslick, 1999)

J. Harle & J. C. Knowles (2001) further advanced this research by showing that different power levels of ultrasound (US) can change genetic expression in bone forming cells (i.e., osteoblasts). This also involves piezoelectricity. They stated:

Ultrasound . . . is commonly used [to] aid . . . injury to soft connective tissues and for fracture healing. However, the precise effects of therapeutic US on tissue . . . are likely to involve changes in key cellular functions. . . . US on the activity of two bone-associated proteins, alkalinephosphatase (ALP) and osteopontin (OP) [was studied] . . . ALP showed

progressively higher expression with increasing US intensities, [but] show[ed] down-regulation at 120 mW/cm², the lowest US exposure.(Harle and Knowles, 2001)

In other studies, ultrasound was shown to markedly improved healing rates (i.e., approximately 30 to 40 percent faster). In animal studies, enhanced fracture healing and improved rates of bone regeneration was observed.(Lennart, 2002)

Dr. Hyson wrote that dolphins, with intelligent and precise control of sound, can accomplish similar or even greater feats.(Hyson, 2004)

Piezoelectricity Effects

Key to our next discussion is the *piezoelectric effect*. To illustrate, if a quartz crystal is *bent*, it will produce an electric charge. Quartz is *piezoelectric*.

One example of the piezoelectric effect is old-fashioned phonographs. To play phonographic records, a quartz crystal needle rides in the groove of a plastic record. As the record turns, the groove, cut according to the recorded sound, bends the quartz crystal needle back and forth. This creates electrical signals that are amplified into the sounds heard.

The piezoelectric effect works the other way as well. If an *electric charge* is placed across a quartz crystal, it *bends*. This aspect is used, for instance, in smoke alarms where a *piezoelectric speaker* is used. Electrical energy causes the crystal in the speaker to deform rapidly and create the alarm's sound.

Approximately sixty percent of your body is piezoelectric, especially bone. Bone is a many-layered sandwich of *hydroxyapatite* (a form of calcium carbonate) and a protein *collagen*. Both are piezoelectric, but of opposite charge. That is, if bending a hydroxyapatite crystal causes a *plus/minus* charge; collagen bent in the same way would generate a *minus/plus* charge.

So, bone, when *bent*, creates *electrical currents*. The bone forming cells, *osteocytes*, follow these currents. When bone is

stressed it creates electrical charges which signal the osteocytes to *thicken* the bone where there is *more* load, or *remove* bone where there is *less* load. This automatically reshapes your bones to match the stress on them.

Similar low frequency electrical currents in your body cause many effects, including directing the pioneer fibers of neurons, causing changes in reaction times or circadian rhythms, and even inducing limb regeneration as documented by Cyril Smith (Smith and Best, 1989) and Robert O. Becker, M.D. (Becker and Seldon, 1985)

Dolphin sounds can vibrate your body and create piezoelectric currents. A key point to remember is that internally and externally generated electromagnetic signals are the same at the cellular level. That is, cells respond in the same way. So dolphin sounds, through their direct acoustic effects (involving micro-currents generated by the acoustic vibration of piezoelectric tissues, especially bone, can clearly cause changes similar to ones already observed in electromedicine and ultrasound therapy.

Cyril Smith (1989) found that low power electromagnetic signals of the proper frequency can reduce allergic reactions, among other ailments. He found therapeutic commonality between the effects of herbal or homeopathic remedies and electromagnetic frequencies. The precise electrical frequency of the therapeutic had the same effect as the physical remedy.

We also know that certain electromagnetic fields resonate with specific biological structures. Royal Raymond Rife and his intellectual descendants found frequencies that resonated with the body to enhance disease resistance and/or prompt recoveries. Other frequencies, Rife determined, destroyed pathogens.

To understand how this works, Dr. Hyson explained the underlying electromechanics of *nuclear magnetic resonance* (NMR) and *magnetic resonance imaging* (MRI). (Hyson, 2004)

“If you stimulate molecules, crystals, or tissues with radio frequencies (RF) or other electromagnetic (EM) fields while

holding them in strong steady magnetic fields, you can find frequencies at which protons absorb the RF strongly and spin rapidly. These resonant frequencies differ for protons in water or in fatty tissue, for example.

“Now, to better explain NMR, protons absorb electromagnetic energy only at specific combinations of radio frequency and magnetic field. This is the point of *nuclear magnetic resonance*.

“During MRI, a patient/client is placed in a strong magnetic field to ‘lock’ the protons in place. Then a radio signal is scanned through many frequencies to find the NMR spectrum. Using computer processing, detailed images of the body, brain, and other tissues are created that reflect differences in tissue chemistry.

“As Rife and others found, some frequencies can disrupt cell structures. The single celled *Paramecium caudatum*, for example, undergoes evisceration, electroporation, and disintegration when exposed to a 1150 Hz AC field generated by a Rife/Bare plasma device. According to theorists, what determines the effective frequency is the 0.5 Gauss magnetic field of the Earth, in combination with the 1050 Hz signal. The two energies produce a NMR frequency affecting key elements in the cell wall of the Paramecium. As a result, the microorganism develops holes in its cell wall—a result called electroporation.

“Another effect similar to electroporation is known as *Voltage Dependent Ion Gating (VDIG)*. Ion channels in the cell open in the presence of a certain external voltage. By creating a charge differential at cell walls, Rife generators and other electromedicine devices can give pain relief, cause relaxation, or stimulation. VDIG occurs at an electrical field of only 1/10 the intensity necessary to produce electroporation, and is thought to produce a flow of ions, like calcium, potassium, and sodium, across the cell wall,” as detailed previously.(Hyson, 2004)

The above methods are available to humans commercially and dolphins naturally.

Dolphin Electromagnetic and Radio Transmission

Dolphin capacities go beyond sound and piezoelectric effects. Dean Rollings and Eldon Byrd studied piezoelectric power generated through dolphins' *melons*. They found that sonic excitation of the melon created electromagnetic fields.(Byrd, 1998)

The melon in a dolphin contains as much as one quart of a special oil called *valproic acid*. When this is vibrated by about 1 kW of acoustic power, because of this large volume oil, the melon produces quite powerful electromagnetic fields. Assuming a conversion efficiency of about 10%, the peak electromagnetic field generated by the melon would be on the order of 100 Watts of power. So dolphins are recognized as being moderately powerful radio transmitters.(Byrd, 1995)

Dr. Byrd measured electromagnetic, magnetic, and electrostatic fields made by dolphins. He measured EM fields while dolphins were swimming with people versus by themselves. He found, when humans were present, EM fields were generated by dolphins at the same frequencies recorded by our EEG, that is, at the rate of brain waves. He felt they were attempting to bond and/or communicate with us in the EEG band.

Human sensitivity limits to electric and magnetic fields are about seven *picowatts* electric and 1 *milligauss* magnetic. Biologically significant events are affected even at these tiny levels. For example, changes of respiration, reaction time, navigation in birds, growth and direction of nerve cell pioneer fibers, and changes in circadian rhythms occur at gradients of 1-2 volts per meter and about 1-3 milligauss magnetic.(Hyson, 2004)

The electromagnetic fields produced by dolphins are sufficient to affect your biology and could even deliver a sizable shock! Such power opens many possibilities in-so-far-as healing studies and therapeutic work with dolphins is concerned.

Changing Gene and Neuroendocrine Expression

If you were to swim with dolphins, your genetic expression would likely change. According to theoretical biologist Jeremy Broner, the best explanation for this dolphin influenced genetic expression is Irene Cosic's resonant model of biomolecular recognition.(Broner, 2003; Birch and Cosic, 1999) According to this model, as with the bioblographic model advanced by Miller et al. (2002), dolphin-assisted DNA control is done by sound, light, and EM resonances.

DNA which is being read, or used, is called "active" or "puffed." When active, it resonantly couples with the protein(s) or product(s) being produced. This suggests that your cells are harmoniously engaged with every other body part through light and sound-based resonant signaling.

Thus, when swimming with dolphins, their sounds can affect every cell and body part through your DNA.

Based on the above information, according to Dr. Hyson (2004), dolphin assisted therapeutic effects mediated through DNA include the alleviation of pain in spinal patients, improved learning in neurologically impaired children, and alleviation of common depression. Following dolphin contact, there is some evidence of hemispheric synchronization between these sea mammals and the humans they contact. In one study, 85% of subjects displayed these modifications following dolphin contact. These findings correlate with findings by other research groups. A hormonal mechanism has been postulated which helps explain observed analgesic and improved learning effects.

Other Treatment Technologies

Respecting this burgeoning field of bioacoustic resonance and electrogenetics, therapeutics have been studied that affect “bioholographic” mechanisms including microcurrent technologies that administer certain frequencies to organisms. Aside from swimming with dolphins, these may be created by: 1) tissue-penetrating electromagnetic field (PEMF) devices; 2) direct and alternating microcurrent devices applied to the skin by electrodes, or into tissues through needles; 3) acupuncture needling and laser stimulation of acupressure points; 4) production of a wide band width of electromagnetic energy by microwave oscillators; 5) needle implants into tumors with application of DC current; and 6) phototherapy treatments with lasers or light emitting diodes, or LEDS.(Haltiwanger, 2002)

Regarding this later category, the use of electrical and phototherapy devices such as lasers and LEDS changes the electric fields associated with the ECM (i.e., extracellular matrix). These create flowing currents both in the ECM and through the cell membrane depending on the frequency applied. These changing electrical fields modify: 1) the electrical potential of cell membranes; 2) intracellular mineral concentrations; and 3) cellular energy production. All of these effects result from genetic influence and alterations in ionic membrane pump activities.(Liu et al., 1990; Blank, 1992)

Although certain bioacoustic and electromagnetic resonances can switch “on” oncogenes, as many researchers now contend, modifications of the electrical potentials of cell membranes can, alternatively, be used to increase the abnormally low transmembrane potential of cancer cells and injured tissues. Effects that are seen when membrane potentials are increased include: 1) enhanced cellular energy (ATP) production; 2) increased oxygen uptake; 3) changes in entry of calcium; 4) movement of sodium out of cells; 5) movement of potassium into the cells; 6) changes

in enzyme and biochemical activity; and 7) changes in cellular pH.(Haltiwanger, 2004)

This subject is mired in controversy. Researchers both promote and warn against the use of electric and magnetic field devices in treating cancer. The controversial history of electromagnetic treatment of cancer is long, fascinating, and would require an entire book to do this topic justice. But we will explore this colorful history superficially here in the sections that follow.

Using Radio-Cellular Oscillators for Cancer Therapy

In the early 1920's, George Lakhovsky developed an instrument he called a *Radio-cellular oscillator*. He used it to experiment on geraniums that had been inoculated with cancer.(Lakhovsky, 1939) From these early experiments he decided that he could obtain better results if he constructed an apparatus capable of generating an electrostatic field; one which would generate a range of frequencies from 3 meters to infrared.(Lakhovsky, 1934)

Lakhovsky theorized that, besides acoustically, living organisms interrelate electromagnetically. In other words, the potential exists for direct energetic communication between living organisms—human and otherwise.

Lakhovsky accurately imagined that every cell in your body is characterized by its own unique oscillation or resonance. As we discussed in Chapter 7, he believed that one of the essential causes of cancer was oscillatory disequilibrium within cancer cells. He believed the way to bring these cells back to their normal oscillations was to provide an oscillatory shock.(Lakhovsky, 1939) His contemporary, Royal R. Rife concurred. Changing the oscillation of cancer cells they thought to be, overall, beneficial.

Lakhovsky theorized that an instrument that provided a multitude of frequencies would allow every cell to find and vibrate

in resonance with its own frequency. In 1931 he invented an instrument called the *Multiple Wave Oscillator* (MWO). Until his death in 1942 he treated and cured a number of cancer patients. (Lakhovsky, 1939) Other individuals who have used his MWO have also reported similar results.

Individuals such as Royal Rife in the 1930's, Antoine Priore in the 1960's, and Hulda Clarke during the past few decades, also invented electronic equipment that has proven beneficial for patients with cancer. (Bearden, 1988; Haltiwanger, 2004)

TENS: The First “Accepted” Electrotherapy

As mentioned, microcurrent devices deliver weak electrical currents directly to your tissues through the use of needle implants or attached electrodes. Alternatively, a PEMF device applies a magnetic field to your body, which induces the production of weak electrical currents within tissues. In review, these weak biocurrents influence the flow of blood and oxygen to deficient tissues. Besides this enhanced circulation, increased nutrient exchange and mineral balance can benefit cellular energetics.

Medical physicians, chiropractors, dentists, physical therapists, and other body workers currently use microcurrent electrotherapy for a variety of clinical conditions. In fact, for many pain-related disorders, it has proven to provide fast relief of symptoms and faster tissue healing.

The advantages of microcurrent electrotherapy are multiple. It has significantly less side effects than drugs. In many cases it can give symptom relief in minutes, and it supports cellular repair processes unlike many pharmacological agents that can have toxic effects when used long term for chronic conditions including pain. (Haltiwanger, 2004)

The first modern acceptable electrotherapy devices to receive wide medical utilization were transcutaneous nerve stimulation devices called TENS units. Transcutaneous Electrical Nerve

Stimulation (TENS) devices use a small current of electricity in the milliamp range, at low frequencies—typically eight cycles per second or less—to block the body's ability to perceive pain.(Leo et al., 1986)

TENS devices are believed to stimulate A-beta pain-suppressing nerve fibers to overwhelm chronic pain-carrying C fibers, and to release endorphins.(Melzack and Wall, 1965; Mercola and Kirsch, 1995) According to Dr. Mercola, for TENS devices to be effective they require that the current be strong enough to feel. "Patients are advised to set the current at the maximum comfortable tolerance, but the nervous system gradually accommodates to this high level of current, causing tolerance similar to that of chemical analgesics. Increasing the current causes mild electrical burns in about one third of the patients" who use TENS.(Mercola and Kirsch, 1995)

Microcurrents Produce Larger Benefits

Microcurrent devices use a current of lower intensity in the microampere range with a longer pulse width. The currents that microcurrent devices use are 1000 times less than the milliamperage range TENS units provide with pulse widths 2500 times longer than the pulse in a typical TENS unit.(Mercola and Kirsch, 1995)

Unlike TENS devices, microcurrent devices help stimulate cellular and tissue repair processes by using electrical currents in the physiological range used by the body. Administration of electric current in physiologic ranges by microcurrent devices have a number of advantageous cellular effects including: increasing ATP generation by almost 500%, enhancement of amino acid transport through cell membranes, and increasing cellular protein synthesis.(Cheng et al., 1986) It is also likely that cell membrane transport of minerals is enhanced because microcurrent devices help correct the reduced cellular capacitance of damaged cells

and increase the reduced electrical conductance of injured tissue. Injured tissue begins to heal faster when cellular energy production increases, the cells regain normal capacitance, and the tissues regain normal conduction of electrical currents.(Becker, 1985; Vodovnik and Karba, 1992). All of this facilitates the reestablishment of normal bioacoustic and electromagnetic communications within the body through the electrogenetic and liquid crystal communication systems.(Ho, 1998; Haltiwanger, 2004)

New research has shown that external electronic devices such as microcurrent machines, low power lasers, LEDS, and infrared lamps, can also supply electrons to the human body. This concept involves the application of electronic and photonic antioxidants through physiologically acceptable wavelengths of light (visible and far infrared light), or by providing electrical currents in the microcurrent range through applications of DC electricity by microcurrent devices.

Warning: microcurrents and PEMF devices should not be used on pregnant women or people with pacemakers.

Phototherapies

Could applications of light replace nutritional supplements in the days ahead? Quite possibly. Tissue interactions with photons of light produce electrons (i.e., the photoelectric effect) when light of the right frequency—far infrared or visible light—interacts with biological tissues. At a fundamental level, a nutrient antioxidant is simply a chemical carrier of extra electrons. Thus, the effect of providing extra electrons by risky and costly chemical means can also be achieved by risk-free low-cost exposures to photons from the far infrared or visible light spectrums.

Far infrared and visible light are bands of electromagnetic energy which are particularly acceptable and beneficial to living creatures. This photonic antioxidant effect provides part of the explanation of how the “vital rays” of far infrared and visible light are involved in healing.

A cell or body couples with an electric field in proportion to its capacitance. The greater the frequency of the electrical field, the greater the current flow in the cell or body. For soft tissues, low frequency natural or man-made electrical fields create currents that are conducted primarily along the surface of cells in the ECM-cell membrane interface. Conduction of electrical currents in the ECM is the dominant effect when very low frequency electrical fields are created in, or applied to, your tissues.

When high frequency fields are applied with external signal generators, this results in charging of the cell membranes causing an increase in cell membrane capacitance and increased conduction of current through the cell membranes.

Because cell membranes naturally have capacitance, this makes cell membranes frequency-dependent conductors. At high frequencies a greater percentage of current will flow into and out of the cell as a circuit loop. Higher frequency fields can strongly affect cell membrane permeability which, in turn, can affect nutrient entry into the cells, and toxin release from the cells and the ECM.

Dr. Haliwanger researched both high frequency multiwave oscillators and experimental whole body phototherapy equipment. He found that both type I and type II diabetics can be helped by these devices. He wrote that improved glucose control can be achieved with such frequency generators affecting insulin receptors and cell membrane glucose transport mechanisms.

On a cautionary note, diabetics and cancer patients should only stay in a multiwave oscillator field for 3-5 minutes when they begin this type of therapy because some individuals will have excessive toxin release and a rapid decline in blood sugar. These individuals need time to clear such mobilized impurities from their tissues and bloodstreams through eliminative organs.

Phototherapy applications are generally gentler, with the onset of significant effects produced somewhat slower than those observed with other electrotherapies including MWOs and microcurrent devices.

Still, as with other electrotherapies, phototherapies (including natural sunlight) may: 1) change membrane permeability; 2) increase cellular nutrient and mineral entry in to the cell, and 3) facilitate release of toxins from the membrane and cell interior. All of these mechanisms help explain the therapeutic benefits achieved through the use of electrical currents, sound, laser light, and/or color energy generating equipment.

Other “Alternative” Therapies and Energetic Implications

Among the most imperative “alternative” therapies for cancer, and every other ailment, is adequate hydration. Most populations, especially in “developed nations,” are significantly dehydrated. As discussed in Chapter 3, the sacred geometry of clustered water that forms the energy-conducting matrix of healthy DNA, as well as the structured water dependant liquid crystal of the extracellular matrix, the ECM, is critically important in maintaining energetic communications and healthy physiological functions in every organism. As a general rule, you should consume half of your body weight converted to ounces in pure drinking water daily, ideally pH adjusted slightly to moderately alkaline. In addition, Dr. Horowitz recommends clustered (i.e., structured) water for approximately twenty percent of this daily intake.(Horowitz, 2000)

Adequate water intake is also essential for detoxification of harmful chemicals and heavy metals from the ECM and within cells. This result can also be aided by massage, oral and IV chelation, infrasonic devices, ultrasonic devices, infrared devices, phototherapy devices, and microcurrent devices. Many clinicians use detoxification strategies that mobilize toxins and promote excretion through skin (e.g., infrared and steam saunas), the liver and GI tract, and kidneys.

Other clinicians have effectively improved their patients' cellular oxygen levels by opening up their microcirculation with enzymes like bromelain, papain, pancreatin and nattokinase; and oral and IV EDTA, and/or by increasing tissue oxygen levels with ozone or hyperbaric oxygen therapies.

Nutritional Supplementation and “Cell Therapies”

Many individuals have benefited from changing the composition of their ECM/glycocalyx/cell membrane interface with compounds like glyconutrients that help change the composition and charge of proteoglycans and the composition and activity of cell receptors. Suggested nutrients for this purpose include Betaglucans, IP-6, Aloe vera extracts, arabinogalactans, glucosamine, and polysaccharides derived from mushrooms and alginates.(Haltiwanger, 2004)

Another “alternative” strategy that has shown great promise is this use of “cell therapies” provided orally or by implantation. Cell therapy research is now advancing using implanted stem cells (e.g., mesenchymal cells). These can differentiate into osteoblasts, chondroblasts, myoblasts, and fibroblasts. Cell therapy is also available with oral nucleic acids and peptide products that provide organ specific components. These organ specific components supply unique nutrition to organ cells different from oral and IV nutrient programs. Cell therapies can also help balance hormone production by the endocrine glands when a preexisting endocrine deficiency exists.(Haltiwanger, 2004)

Aside from working to restore cellular electrogenetic “up-regulation” and the electrical properties of cells using minerals and nutritional products. Regimens discussed below for cancer are generically listed in table 12.1.

Antioxidants, Redox Systems and Free Radicals

Protection of cell membranes, mitochondria, and genetic machinery using (endogenous and exogenous) antioxidants is another area worthy of discussion. This includes intracellular and extracellular antioxidants and Redox systems; particularly glutathione pathways.

Antioxidants are life's free radical scavengers. The cellular antioxidants are chemical compounds that have the ability to supply electron-deficient free radicals with their missing electrons, therefore, neutralizing their destructive oxidative effects on biomolecules and cells.

How are most destructive free radicals formed? Free radicals result from both natural biochemical processes and environmental factors, such as exposure to chemical toxins, heavy metals, ultraviolet light, x-rays, radiation therapies, nuclear radioactivity, alcohol, and smoking.

Naturally, oxygen is required by the metabolic reactions of your cells to obtain energy from the chemical burning of food. In the process of energy production, some toxic compounds are normally produced. When energy is produced in the mitochondria of cells, some of the oxygen is converted to a variety of free radicals such as superoxide (O_2^-), hydrogen peroxide (H_2O_2), and hydroxyl (OH^-) radicals. These free radicals are extremely reactive molecules that contain at least one unpaired electron in their outer orbital shell. Body exposures to chemical toxins and irradiation also produce free radicals. Unless adequate amounts of cellular and extracellular antioxidants are available, these free radicals begin to damage cellular structures such as your cell membranes, mitochondria, the nucleic acids of DNA, and cellular proteins, impairing the ability of your cells to repair themselves and reproduce. (Morel et al., 1999)

When cell membranes are damaged by free radicals their ability to hold an electrical charge (i.e., their capacitance) is dis-

rupted along with cellular organelles that transport minerals and other nutrients. When mitochondria are damaged by free radicals, cellular ability to make energy is impaired. When free radicals damage genetic codes, attacked cells cannot reproduce normally. Free radicals also cause lipid peroxidation which can result in lowering HDL cholesterol. This may cause damage to cell membranes lining your blood vessels. When these delicate membranes lining blood vessels are damaged, an inflammatory process may result which leads to thickening of blood vessels with the production of arterial plaque. These tissue reactions created by free radicals are also thought to be involved in premature aging, and the development of cancer, atherosclerosis, arthritis, immune disorders, and other degenerative diseases.

The redox status of cells depends on the ratio of oxidized (inactive) and reduced (active) redox molecules. When oxidative conditions occur following injuries, oxidized components predominate. This imbalance can negatively affect genetic activity, cell organelle function, and cell detoxification functions.

Because free radicals are defined as molecules that have lost an electron they can be said to be electron deficient. These electron deficient molecules then search your body attempting to find replacement electrons that they can “steal,” so they can also be thought of as “electron thieves.” The replacement electrons are generally stolen from cell proteins, cellular DNA, or cell membranes. When enough electrons are taken from these structures, the cells become damaged. They can then die, undergo cancerous transformation, or be repaired by an antioxidant. Because free radicals are continuously produced as a natural toxic by-product of energy production, your cells use a variety of antioxidant systems to prevent their accumulation.

From a biologist’s point of view, antioxidants are bioelectric chemicals that are able to donate some of their own electrons to neutralize electron-deficient free radicals. Conventional wisdom typically holds that antioxidants have to be nutritive substances.

However, from a physicist's point of view, antioxidant effects can also be achieved by other methods including energetic ones.

Mineral Nutrition and Repair of Membrane Electronics

The vitally important role played by minerals in reestablishing proper membrane electrodynamics for the prevention and cure of chronic ailments, including various cancers, is commonly overlooked.

In order for your cells to optimally operate and control electromagnetic energy and chemical energy production, the cell membranes, including those covering organelle (e.g., mitochondria) and the nucleus, must have the right minerals, in the right locations, and in the right concentrations.

Dr. Hans Nieper recognized this fact and focused his professional career developing mineral transporters and more. He investigated other orthomolecular substances that could support and repair the outer cell membrane and inner membranes of cell organelle. He discovered certain minerals and mineral transporters optimized membrane structure and functions including the bioelectric capacitance of cell membranes. (Alexander, 1997a, 1997b; Nieper et al., 1999)

As mentioned in Chapter 5, capacitors are well known electronic components that are composed of two conducting sheets, or metal plates, separated by a thin layer of insulating material known as a dielectric. Cells contain several forms of biological capacitors, which consist of an insulating material—the membrane—covered on both sides by collections of charged dissolved minerals. The mineral layers serve the same function as conducting metal plates. Because the exterior cell membrane, and the membranes of cell organelle in animals and plant chloroplasts are biological capacitors, they have the capacity to accumulate and store electrical charge. Hence they are able to give energy up when needed. And since energy is needed to run any type of

machinery, be it mechanical or biological, it makes sense that nutrients that enhance energy production, energy storage, and energy utilization, have profound biological effects.

Improved cellular bioenergetics can also be achieved nutritionally by use of certain nutrients that help provide structural materials for cell membranes, membrane repair, and mitochondrial enzyme production of ATP. Some of these most effective compounds are the mineral transporters aminoethanolphosphates (2-AEP's), orotates, aspartates, and arginates according to Dr. Nieper and others.(Nieper et. al., 1999; Haliwanger, 2002)

2-AEP mineral transporters enhance cell membrane capacitance in several ways. First they repair damaged cell membranes. Second, they effectively deliver minerals to the outer surface of cell membranes.

The orotate, aspartate, and arginate mineral transporters are advanced mineral delivery systems that effectively deliver minerals into the interior of cells. Mineral delivery within cells is important because many cytoplasmic and mitochondrial enzymes require minerals in order to work.

Biological utilization of a mineral encompasses far more than just mineral absorption through the gut. Biological utilization of minerals includes mineral transport through the blood stream, and mineral delivery into cells. Most mineral supplements generally break apart during the processes of digestion releasing ionized minerals into the lumen of the digestive tract. Next, these move into the bloodstream, but this does not guarantee the minerals will be directed to any particular tissue, or be transported to where they are needed. This requires carrier molecules.(Nieper, 1961, 1966a)

The joining of carrier molecules with minerals forms electrically neutral compounds that have different transport properties.(Nieper et al., 1999) Calcium orotate, calcium arginate, calcium aspartate, calcium 2-AEP, magnesium orotate, magnesium arginate, potassium arginate, potassium orotate, po-

tassium-magnesium aspartate, zinc orotate, and zinc aspartate are all mineral transporters. When these mineral transporters are properly manufactured to be acid resistant, they deliver minerals still bound to the transporter into the alkaline environment of the small intestine. From here, the mineral compounds are absorbed relatively intact into the bloodstream.(Alexander, 1997a, 1997b; Nieper et al., 1999).

The mineral-transporter complex then remains stable in the bloodstream with low dissociation rates. The complexed minerals are, thus, guided and not released until they enter the target tissues or cells. The attachment of minerals to carrier molecules forms electrically neutral stable complexes that allow this selective direction of minerals to particular tissues that metabolically use the carrier molecules. This form of directed mineral nutrition even enhances mineral entry into cells that are diseased, damaged, or have disturbed cell membranes. Thus, the use of mineral transporters can increase the bioavailability of vitally needed minerals to even cancerous tissues.(Nieper, 1966a, 1966b, 1966c, 1967a, 1967b, 1968, 1969, 1970, 1971, 1973, 1985; Buist, 1972, 1978)

Dietary correction of essential intracellular mineral deficiencies such as potassium, magnesium, zinc, and other trace elements is critically important. For this reason, very similar cancer diets have been developed and promoted by Dr. Nieper and Dr. Max Gerson. Gerson Institute clinicians observed that when cancer patients were responding to treatment they would lose large amounts of sodium in their urine. This observation was one factor that made Max and Charlotte Gerson theorize that cancer cells accumulate excess amounts of sodium and water, and that the use of high potassium diets could be very beneficial. The Gersons prescribed programs using natural detoxification and diets containing large amounts of fresh vegetable juices, and calf liver juice, which provide minerals, enzymes, and electrons. They taught that such diets can assist your body in detoxifying; particularly when coffee enemas were used to promote bile flow and bowel cleansing.

Additional research showed that cell membrane repair can be initiated by changing the composition of cell membranes with lipid and sterol compounds such as 2-AEP, essential fatty acids, sterols, and phytosterols. According to researchers Emanuel Revici, Mary Enig, Hans Nieper, Patricia Kane, and Steve Hiltiwanger, cell membrane repair is a major health promoting practice. Again, this can be done through nutritional interventions using lipids, sterols, and minerals.

Good sources of essential fatty acids and phospholipids are lecithin (phosphatidyl choline), which is found in eggs and soybeans; phosphatidyl serine, flax oil, avocado oil, walnut oil, hazelnut oil, hemp oil, grape seed oil, sesame oil, fish oil, olive oil, evening primrose oil, borage oil, blackcurrant seed oil, butter, coconut oil, and phytosterols. Squalene, also indicated and discussed in greater detail below, is a compound found in high concentrations in shark liver oil and to a lesser degree in olive oil.

Poor choices of fats are cottonseed oil, soybean oil, corn oil, canola oil, transfatty acids, and any hydrogenated or partially hydrogenated oil. This generally eliminates baked goods created by the largest food manufacturers.

2-AEP is a nutritional supplement usually bound to calcium alone (i.e., calcium 2-AEP) or calcium, magnesium, and potassium—2-AEP complex. 2-AEP is a cell membrane repair molecule that is a precursor of phosphatidyl ethanolamine. This molecule helps seal cell membranes reducing the entry of toxins, bacteria, and viruses. These molecules also help maintain and improve the electrical potential of cell membranes particularly in cells involved in inflammatory processes. (Nieper, 1988). Dr. Nieper reported that people who regularly used AEP mineral transporters along with calcium aspartate, or calcium orotate, had significantly less rates of prostate, colon, and breast cancers.

Emanuel Revici was an unconventional cancer researcher who developed a treatment for cancer called “guided lipid” therapy. Revici believed cancer patients had two basic patterns

of lipid imbalance—either an excess of sterols, or an excess of fatty acids. He tested his patients to determine which pattern that they had; then he gave either fatty acids or sterols to correct their imbalances.(Revici, 1961)

Other noteworthy researchers in this field include Patricia Kane and Mary Enig. The former pioneered the use of red blood cell (RBC) membrane analysis to determine nutritional adjustments specific for each individual. Mary Enig extensively wrote about the role of dietary fats in disease causation and disease prevention.

As mentioned above, squalene is a naturally occurring poly-prenyl compound, structurally similar to beta-carotene, which composes up to 70% of the oils in shark livers. Squalene is a nutritional compound that in conjunction with AEP, magnesium, zinc, selenium, and the amino acid taurine, helps stabilize the structure and functions of cell membranes. Squalene may also have a special role in treating cancer and degenerative diseases in that, along with AEP, it appears to help support membrane structure and function. Squalene also has important roles in wound healing, immune system regulation, and the production of steroid hormones. Your body's natural production of dihydroepiandrosterone (DHEA), and pregnenolone, can be increased by ingestion of squalene. These steroids are surveillance hormones playing important roles in reducing cancerous transformations in degenerative tissues.

The use of this ingredient in vaccine formulas, however, is suspect since it may prompt excessive immune reactions in hypersensitized individuals.

Electrogenetic Flow Factors and Healing

Since membrane composition appears vitally important in electrochemistry and bioelectric functions, modulating fatty acids and sterols through nutritional interventions and supplemen-

tation may be very helpful in reestablishing the circuitry, and energy flow, needed to restore health.

Additional methods to restore intra and intercellular electrodynamics are advisable. These include reducing intracellular sodium concentrations that may reverse certain diseases. Again, this is based on the common pathological status of excessive intracellular positively charged sodium ions that reduces the negative interior potential of inner membrane surfaces resulting in a fall in membrane potential. This approach may, likewise, help restore membrane potentials of energetically compromised cells.

Compounds like mineral transporters may be used to increase intracellular delivery of magnesium, potassium, and calcium, normalizing the body-electric, similarly improving the energy and health status of whole organisms.

In cancer therapy, consideration might also be given to enzymes and electrical treatments that help remove the sialic acid and excessive negative charges from the external surface of cancer cells (i.e., the glycocalyx). This approach targets excessive negative charges in the glycocalyx. This reduces membrane potentials of cancer cells, which may be a primary cancer trigger. It would seem logical to normalize the electrical charges on both sides of tumor cell membranes.

Indeed, corrective intracellular, extracellular, and membrane measures might be used to address the abnormal electrical properties of diseased and cancerous cells. Intracellular measures include the use of intracellular potassium and magnesium mineral transporters, and the amino acid taurine, to reestablish more normal intracellular levels of these minerals. Calcium aspartate can be used to deposit calcium on the inner side of cell membranes. Extracellular measures could include the use of calcium 2-AEP to lay down a shell of positive calcium ions on the surface of cells to neutralize negative surface charges. Also enzymes can help reduce the number of negatively charged sialic acid residues on the surface of cancer cells. Cell membrane measures (in some cases) might include use of squalene to improve sodium excretion from

cells and oxygen entry into them.

Mineral transporters such as orotates, arginates and aspartates can be used to adjust intracellular mineral concentrations.

Some clinicians have also reported positive results by improving the cellular capacitance of cancer (and otherwise diseased cells) by using PEMF, microcurrent, infrared and phototherapy equipment.

All told, logical therapeutic approaches based on recent advances in the field of bioenergetics, improved cell membrane potentials, and membrane capacitance will affect mitochondrial production of ATP, cell membrane permeability, production of proteins and other macromolecules, and overall health enhancement.

Additionally, as described in the next section, certain nutrients have the ability to support the electrical potentials of cell membranes. These nutrients include essential fatty acids, phospholipids, sterols and nutrients such as mineral transporters that help normalize intracellular mineral concentrations in diseased cells. Such nutritional interventions have, thus, become highly regarded and widely used in the field of natural healing.

The combination of nutrient-enriched cell membrane repair, and correction of deficiencies of intracellular mineral concentrations (primarily potassium, magnesium, zinc and calcium), and correction of excessive intracellular levels of sodium, commonly results in improvements of cell membrane capacitance and general health. All of these healing pathways normalize and optimize electrogenetic expression and cellular upregulation from well hydrated DNA.

Nutritional Factors in Enhanced Genetic Expression

Genetic repair can occur from the assimilation of nutrients such as folic acid and zinc. These increase the activity of DNA transcriptase and Vitamin B12, B6, and methionine to improve DNA methylation (Osiecki, 2002).

In addition, Dr. Nieper advanced genetic repair research using a novel approach to chemotherapy with the “Venus Fly-Trap” (*Dionaea muscipula*) and Iridodial. Nieper determined that extracts from the carnivorous plant contain the active enzymes endopeptidase and endonuclease. These were found to inhibit genetic activity in cancer cells. Venus Fly-Trap plants, Dr. Nieper explained, excrete substances which destroy genetic information in ingested insects. Without this survival mechanism, the plants absorb genes from digested insects and thus become more susceptible to genetic abnormalities. The “Venus Fly-Trap” was shown to contain about a dozen substances, such as plumbagin, droseron, and hydroxydroseron, which digest genetic material and inhibit replication of malignant cells. Nieper also theorized that these extracts may be useful in eliminating tissue damaged from radiation therapy, while leaving normal cells unaffected.(Nieper et al., 1999)

In addition, iridodials are a primary source of dialdehydes, which “are extremely powerful genetic-repair factors,” according to Dr. Nieper. Dialdehydes are “lipid soluble agents that can penetrate the lipid membranes of the outer cells of tumors.” Iridodial is extremely similar to the activated dialdehyde (i.e., didrovaltrate).(Nieper et al., 1999) Besides carnivorous plants, insects (ants in particular) are “the most effective producers of gene repair substances.”(Nieper, 1990)

Insects are phylogenetically extremely old. Their abilities to conserve and safeguard their genetic codes are superb. Similar to sharks, they hardly ever develop tumors. They are able to host large amounts of viruses without showing ill effects. Yet insects have no immune system. Evolution only equipped them with a repair material called iridodial (i.e., insect aldehydic iridoides).(Nieper, 1990)

I According to Dr. Nieper’s earlier work, iridodial inhibits viruses from causing genetic alterations much like plumbagin and

droseron.(Nieper, 1985). Gene-repairing iridodials work by inactivating the undesired genetic material from an infecting virus; thus, protecting the normal cellular genome. Dr. Peter Thies of Germany first described the anti-malignant genetic-repair properties of iridodials in 1985. Also in 1985, Dr. Didier of Gifhorn, Germany, first reported pulmonary (lung) tumor regression by use of iridodial.(Nieper, 1990)

Dr. Nieper reported that both *Dionaea muscipula* and iridodial could extinguish cells which were genetically impaired.(Nieper, 1996) Cells that were improperly programmed would, likewise, be discarded.(Nieper, 1984) Dr. Nieper found that cells already transformed (i.e., genetically altered and/or cancerous) could be specifically targeted while normal cells were left unaffected. This form of genetic repair therapy, Dr. Nieper concluded, “represents, in many ways, an imitation of the natural cancer defense of your body.”(Nieper, 1985)

Dr. Nieper reported that iridodial and *Dionaea muscipula* were completely free of any side effects. They were so nontoxic that they could be safely administered during early stages of disease and for an unlimited time; far superior to most other substances used in cancer chemotherapy.(Nieper, 1990; 1996)

Creative Consciousness and Mathematical/Musical Oneness

“Beam me up Scottie.”

The transporter on Star Trek’s USS Enterprise rarely failed to deliver the physical precipitation of Captain Kirk’s biohologram back aboard ship. Only rare mechanical maladies, or electric field disturbances, prevented the transporter’s function. So it is with the Sacred Spiral, DNA.

Science fiction is based on scientific fact. In this case, your genes are much like transporters. They facilitate the physical manifestation of Divine will, including all of nature’s organic

bounty, which miraculously crystallizes in mid air much like the heroes did in Star Trek.

The cosmic mechanism for this employs a quantum field energy matrix. This is somewhat like a conducting wire. Your DNA receives energy from this domain and relays this universal essence through bioacoustic/electromagnetic signals. In this way, “Yah’s energy,” or what many people call “universal consciousness,” is relayed to humanity and shared by all life forms. This “I am” communing presence of light and love holds the resonant frequencies of the Creator’s colors and soul. By choice and creative power, this mechanism warms hearts, uplifts spirits, and bathes everyone and everything in sacred sounds of harmonious Oneness.

DNA plays a pivotal role in all of this. The molecular structure of the Sacred Spiral incorporates the geometric form known as the Golden Section. This mathematically and geometrically special Golden Section is harmonically attuned to the Fibonacci series of numbers, 34 and 21, due to the fact that each full cycle of DNA’s double helix spiral measures 34 angstroms long by 21 angstroms wide. Their ratio, 1.6190476, is very close to Phi—O—1.6180339.

This musical mathematics determines the sacred geometry of DNA. It is a perfect five-sided pentagon for each helical spiral of the molecule. Double this to construct the twin helix, with each full helical spiral rotating 36 degrees, and you end up with a decagon formed from the two pentagons. (It is not likely coincidental that the highest level possible in the hierarchy of the global elite’s secret society, Freemasonry, is also 36; wherein $3+6=9$ or completion in Pythagorean mystery school math.)

This uncommon knowledge about DNA’s structure, based on perfect musical math, helps to explain your overall physical structure. For example, your pentagonal body shape, with two arms, two legs, and a head, results from resonance frequencies of energy manifested through pentagonal-shaped genetic anten-

nae. Again, all in Divine proportion to the Golden Mean (0.618). Again DNA's cross section is based on Phi. (See figure 5.6.) The ratio of the diagonal of a pentagon to its side is Phi-to-one. Thus, "no matter which way you look at it, even in its smallest element, DNA, and life, is constructed using phi and the golden section!"(The Phi Nest, 2004)

The creator's signature, therefore, is on every living organism. In fact, the Golden Section, or Phi, is found throughout nature. This reflects the relationship between the Creator and all of creation. How so? "There is only one way to divide a line so that its parts are in proportion to, or in the image of, the whole." Only by "tri-viding" the whole is the relationship of component parts to the whole preserved. This is much like our theological understanding of God and the Trinity. We are said to be created in the Creator's image, filled with the Holy Spirit, and kin to the Father and "Prince of Peace."(The Phi Nest, 2004)

There are additional hidden meanings in the symbol for the Golden Number—O. (See more detailed discussions at www.goldennumber.net.) As previously mentioned in figures 9.6, the British Royal flag subtly expresses sacred geometry depicting the "Sacred Four Great Forces" of early Naacal history. The original cross, among the earliest of Naacal symbols, was found in 70,000 year old writings. It is the original symbol for Phi with the addition of a second line crossing the center of the circle horizontally.

The circle alone, mathematically, symbolizes zero. Theologically, this represents nothing or nothingness. In ancient theology, a simple line between two points represented unity or communion with the Divine Source. The nothing symbol, zero, split by the line of unity, yields the Greek letter Phi—O— denoting the Golden Number or Golden Mean. Again, this is structural essence of DNA. Therefore, these combined symbols reflect, and help explain, the establishment of the Creator's relationship to humanity, and all of creation, expressed through the mathemati-

cal constant 1.618, and DNA.

Adding zero to one in this way is, not surprisingly, the beginning of the Fibonacci series.

Music, principally written using these two ancient theological and mathematical symbols (i.e., ovals and lines), also reflects and facilitates Divine communion.

The fundamentals of this music/math creative language naturally resonate within you, and precipitate everything, to further express and replenish Divine essence and/or DNA.

These truths have been metaphorically expressed throughout the ages in poetry, prose, and even Hollywood. In “Yellow Submarine,” for instance, peaceful loving civilization is enslaved simply by putting a stop to music. By freeing silenced “Sergeant Pepper’s Lonely Hearts Club Band,” and rebroadcasting their simple melodies—“all you need is love, . . . love, . . . love,” humanity transformed from fragile black-and-white to blissfully reanimated living color.

Expanded Healing Through the Evolution of Consciousness

The Christian Messiah, Yeshua, told his disciples, “Nothing will be impossible for you.” (Matthew 17:21) Later he predicted, “You will do more than what I have done.” If you have come thus far, near this book’s end, you are a good candidate for this prophesied glory.

This work reveals the truth about your DNA and its empowering dynamics. The preceding chapters explained your spiritual nature, declared your creative divinity, honored your inherited intelligence, and supported the fulfillment of your unique destiny, best incorporating selfless service. A communion revolution is spreading widely to those who have eyes to read these words, and ears to hear this historic calling. If you are what advancing metaphysical and electrogenetic sciences say you are—superhu-

man, not simply human—there is no need to deny yourself this ecstasy. Heaven on earth is here, right now, all around you, as mediated through your DNA.

With this knowledge and spiritual blessing comes loving empowerment. Our beleaguered planet begs your gifted sharing and reactivity. This knowledge of who you really are, and choice to share it for the betterment of our planet, is now available. It has been liberated, herein, from those who have hidden or high-jacked this truth for millennia.

Remember what life was like before you were conned into thinking you were less than perfect? Children, early on, demonstrate this attitude often. Recall your childlike free spirit. Celebrate more of what you are—divinely empowered super perfection in human form—and your consciousness will evolve exponentially. Pray for it. Meditate on it. Visualize to create it as the Creator did with you. Herein lies your greatest gift, and humanity's greatest hope for physical and spiritual salvation. Apparently, based on the information contained herein, they go hand-in-hand.

We are calling your attention to your Divine calling. The later comes with a powerful anointing for those on the front lines of this spiritual renaissance. And you know who you are.

Dr. Horowitz said during a recent lecture. "Most of you have felt an increased spiritual sensitivity during the past few years. Synchronous in experiences are becoming more routine. You think of something or someone, and within a day or two they manifest. Your work on special projects flows with all the resources miraculously appearing. This is like living a *Celestine Prophecy*-like existence. The bioacoustic and electromagnetic matrix through which the Holy Spirit flows is real. It's what animates your DNA. It transmits the Kingdom of Heaven to you, and through you, right now, on Earth as it is in Heaven. 'There is nothing missing and nothing broken in Heaven's Kingdom,' scriptures say. It is perfect, just like you are, by nature.

There is no dis-ease or dissonance herein. Divine love songs permeate the universe. Blocking that energy, by ignorance and/or poor choices, creates disharmony and disease all around you. See beyond that to the Divine domain for real love and healing.”(Horowitz, 2004)

For the *DNA: Pirates of the Sacred Spiral* video and DVD lectures (Parts 1 and 2 from Tetrahedron Publishing Group, 2004; call 1-888-508-4787) Dr. Horowitz summarized, “You are a digital bioholographic precipitation, crystallization, miraculous manifestation of Divine frequency vibrations. Your and the Creator’s energy flows to and from your DNA through sacred geometric rings of structured water. Membrane capacitors hold these vibrations for later use. Gels of protein crystal lattice networks signal love throughout your body, each buzzing fiber and filament is spiraled to generate maximum energy.

“These proteins spiral much like ‘Tesla coils,’ to amplify your Divine energy. Chemicals only play secondary roles. Layers of structured water relay their energy signatures for life and love, not chemicals. Every chemical and enzyme is surrounded by layers of water. Structured water primarily mediates biomolecular reactions. Positive and negative ions flow by nature, by Divine design, and by your will and loving intent. These flows affect body physiology, enzyme function, general metabolism, and rapid healing.

Given who you really are—a superhuman resonating with Divine essence or consciousness—you hold miraculous healing capabilities, literally, in your hands. It’s time to fully develop your skills as miraculous hands-on healers. The time is now and the need is *urgent*.”

Sociopolitical Implications of These Revelations

Cultural development reflects the evolution of human consciousness. Additionally, advanced cultures have all maintained a healthy respect for spiritual evolution occurring within each individual. As this book has advanced our understanding of ourselves as genetically mediated creationistic accomplishments, so has it raised questions concerning the implications of this knowledge for society. Political and economic organization of populations, the dominating trend for millennia, is clearly challenged by this superior intelligence and spiritual renaissance. If species evolve through survival of the fittest, and knowledge is power, the most knowledgeable in the realm of DNA's Divine dynamics are also the likeliest to survive and thrive.

A complete, albeit complex, paradigm shift is imminent. It is now upon us. Spiritual values are not fundamentally changing, they are being globally inspired exponentially to awaken us. By the musical and electrical forces precipitating nature, you are being uplifted. In a Christian sense, it is like the long awaited "rapture." People's attitudes and behaviors are being increasingly blessed and positively changing as a result. You are becoming, and *feeling*, more spiritually centered, sensitive, and discerning. Your old emotional patterns are giving way to steadier states of bliss. You breathe freer and easier as this deeper state of restfulness and Divinity perfuses your being.

Imagine the social implications of this transformation reaching "the 100th monkey." First imagine a family operating at this high level of awareness and spiritual discipline. Families form communities, and geopolitics is, likewise, influenced. Everything must give way to the supreme force of nature. So our political climates are also changing. Given the urgency of perplexing problems everywhere, this is the only rational expectation and solution.

Masses of people have prayed for this spiritual promise, and your prayers are being answered. You are witnessing a historic event in sociocultural and spiritual evolution that you will not see on the evening news.

Many authors, investigators, philosophers, and others have responded to this unifying movement and message. Many have issued similar explanations pertaining to myriad disciplines. Regarding spiritual gains in sociocultural development, the implications of this book parallel works by sociologists Don Beck, Ken Wilbur, and others.

For example, Dr. Beck's work may be seen as advanced biopsychosocial systems research that originated with the late Dr. Clare W. Graves of Union College. According to Canada's *Maclean's Magazine*, Dr. Beck's "Spiral Dynamics" theory "explains everything." More modestly, Beck described his work as revealing "the hidden complexity codes that shape human nature, create global diversities, and drive evolutionary change. These dynamic spiral forces attract and repel individuals, form the webs and meshes that connect people within groups, communities and organizations, and forge the rise and fall of nations and cultures."(Beck, 2003)

Beck's notion of "spiral integrity" in the evolution of civilization dovetails with the information in this book and the science of *memetics*, including the concept that humanity's spiritual evolution is transmissible.

A meme (pronounced 'meem') is a term coined by widely known evolutionary biologist and geneticist Richard Dawkins (1976). A meme is said to be the "smallest unit in cultural evolution, analogous to genes in biological evolution." Dawkins originally presented his satirical, moderately sarcastic, view of human behavior this way. He likened memes to "genes" which relayed "contagious information" that replicated itself "by parasitically infecting human minds and altering their behavior, causing them to propagate the pattern."

A “science of memetics” developed to study this field and help answer questions regarding the psychosociology of cultural evolution. “Individual slogans, catch-phrases, melodies, icons, inventions, and fashions” were said to be “typical memes.” An idea or information pattern was not a meme until it caused someone to replicate it, to repeat it to someone else. All transmitted knowledge was then classified as memetic.(Hofstadter, 1986; Grant, 2003).

Yet the authors of this book perceive something greater is ongoing. This spiritual renaissance transcends mere mental or cognitive/behavioral theory and interpersonal/social dynamics. What is occurring globally is holistic and heart based, not mechanistic nor mind based. It is a revolution in being and becoming more Godlike, empowered through loving kindness and gentle attitude. And this spiritual renaissance is not based on theory alone. Hard evidence in quantum physics and electrogenetics largely explains this common, and increasing, human experience.

PUBLISHERS WEEKLY reported that, “Memetics is a radical science, modeled on genetics, that cuts against the grain of conventional and habitual thinking.”(PWeekly, 2002) Generally, throughout society, habitual (i.e., traditional) thinking is compartmentalizing, cross-culturally alienating, and special interest oriented. Alternatively, what we are advancing in this book may be used to help promote more holistic concepts for problem solving and collaboration between individuals and groups.

Dr. Beck wrote that, “By exploring and describing the core intelligences and deep values that flow beneath what we believe and do,” macro applications of this model can help us reexamine and recreate everything.

“Everything is related to everything else,” Dr. Beck wrote. “For example . . . attempts to deal with the HIV pandemic only through medical solutions fail dismally unless equal time and

resources are spent on the cultural dynamics that contribute to the spread of the virus. It also demonstrates why simplistic, fragmented approaches to international and domestic terrorism, crime and drug-related problems, education, economic, and social development, . . . will continue to confound us unless we integrate, align and synergize . . . It's not that we need to form new organizations. It's simply that we have to awaken to new ways of thinking. I believe it makes no sense to spend a lot of time attacking the current realities. It is time to create the new models that have in them the complexity that makes the older systems obsolete. And to the extent that we can do that, and do that quickly, I think we can provide what will be necessary for a major breakthrough for the future.”(Beck, 2003)

A demonstration of this productive philosophy in action is presented in figures 12.6 through 12.8. These narratives document Dr. Horowitz's personal transformation, based on the evidence in this book, with far reaching political implications. Reprinted here are letters received and written by Dr. Horowitz concerning an herbal remedy he had developed and helped market for SARS and other serious flu-like illnesses. These actions prompted successive warnings by the Food and Drug Administration—the same FDA that issued policies and procedures, as earlier chapters revealed, lucrative to the Pirates of the Sacred Spiral. In previous books, and scientific publications, the FDA had been proven by Dr. Horowitz to play a contributing role, along with the CDC and Merck pharmaceutical company, in developing the vaccine that simultaneously triggered HIV/AIDS in Africa and New York.(Horowitz, 1998; 2001) Dr. Horowitz's initial response to the FDA's threatened action against him and his corporate affiliates predated his integration of the electrogenetic and spiritual revelations advanced herein. (See figure 12.7) In his earliest correspondence he projected a great amount of sarcasm and antagonism toward this regulating and enforcement arm of the United States federal government. His second letter, however,

was written for inclusion in, and the conclusion of, this book. Following FDA threatened armed assault and property theft, and criminal injunctions lodged against him including the risk of incarceration, the doctor assumed a more benevolent attitude of spiritually empowered social service. (See figure 12.8.)

It is said that “the pen is mightier than the sword.” Dr. Horowitz’s open letter, delivering enlightened amiable intelligence to the FDA, placed this organization (in need of spiritual lift and administrative transformation) in a corrected, yet still vulnerable, position. Reread Dr. Beck’s quote above, followed by Dr. Horowitz’s second reply letter to the FDA. You will see how the information in this book was successfully used to affect political service in helping to neutralize corruptly biased, special-interest-influenced, “drug enforcement” policies affecting American society. This information may also help “immunize” FDA officials against their own blind bias or ignorance.

Dr. Horowitz and his coauthors pray that these honest reflections on genetically freeing truths, and this rapidly growing knowledge attesting to your increasing spirituality, even empowering Divinity, will serve you, humanity, and generations eternal.

Figure 12.6. FDA Warning Letter Sent to Dr. Horowitz



DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration
Seattle District
Pacific Region
22201 23rd Drive SE
Bothell, WA 98021-4421

Telephone 425-455-4755
FAX 425-455-4955

May 19, 2004

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

In reply refer to Warning Letter SEA 04-30

Leonard G. Horowitz, D.M.D., M.A., M.P.H.
Owner/President/Managing Member
Healthy World Distributing
206 North 4th Avenue, Suite 147
Sandpoint, Idaho 83864

WARNING LETTER

Dear Dr. Horowitz:

This letter refers to your firm's marketing and distribution of the products "Urbani SARS Formula Nasal Spray", "Urbani SARS Formula (Standard)", "Extra Strength Urbani SARS Formula", and "Urbani SARS Formula Homeopathic (8X)" for the prevention, treatment, or cure of Severe Acute Respiratory Syndrome.

Statements made on your Internet websites, healthyworlddistributing.com and cureforsars.net, demonstrate that these products are being marketed with drug claims. Examples of these claims include: "Scientifically formulated as a natural defense and effective treatment for coronavirus infections." Under section 201(q) of the Federal Food, Drug, and Cosmetic Act (Act), products marketed with such claims are drugs.

The products "Urbani SARS Formula Nasal Spray", "Urbani SARS Formula (Standard)", and "Extra Strength Urbani SARS Formula" are "new drugs" under section 201(p) of the Act because they are not generally recognized by qualified experts as safe and effective for their intended uses. Since these products are new drugs, section 505(a) of the Act prohibits their marketing in the United States without approved new-drug applications.

Because the "Urbani SARS Formula Homeopathic (8X)" is intended to prevent, treat, or cure a serious disease that requires diagnosis and treatment by a physician, it is a drug that is not safe for use except under the supervision of a practitioner licensed by law to administer it. Accordingly, this product is misbranded within the meaning of Section 503(b)(1) of the Act. The product is further misbranded within the meaning of Section 503(b)(4) of the Act in that its label fails to bear the statement "Rx only".

In addition, these products are misbranded under section 502(f)(1) of the Act because their labeling fails to bear adequate directions for use for the conditions that they are intended to treat.

This letter is not intended to be an all-inclusive review of your Internet web sites and the products marketed by your firm. It is your responsibility to ensure that all of your firm's products comply with the Act and its implementing regulations.

We request that you take prompt action to correct the noted violations. Failure to promptly correct these violations may result in enforcement action being initiated by the Food and Drug Administration without further notice. The Act provides for the seizure of illegal products and for injunctions against the manufacturer and/or distributor of those products.

Please notify this office in writing within fifteen working days of receipt of this letter regarding the steps that you have taken to correct the noted violations. You should also include an explanation of each step being taken to ensure that similar violations do not recur. If corrective action cannot be completed within 15 working days, state the reason for the delay and the time within which the corrections will be implemented.

Please send your reply to the Food and Drug Administration, Attention: Lisa M. Athar, Compliance Officer, 22201 23rd Drive SE, Bothell, Washington 98021-4421.

By copy of this letter, Mr. Mark Gustafson, Administrative Contact for the domain name www.healthyworlddistributing.com, will be notified of this action.

Sincerely,

Charles M. Breen
District Director

Figure 12.7. Dr. Horowitz's Initial Response to FCC/FDA

www.CureforSARS.net

Leonard G. Horowitz, D.M.D., M.A., M.P.H., Managing Member
1-208-265-0795 FAX: 1-208-265-2775 E-mail: len@cureforSARS.net

May 12, 2003

Federal Trade Commission
Bureau of Consumer Protection
Washington, D.C. 20500

Dear Commissions and Bureau of Consumer Protection Officials:

This open letter is in response to the e-mailed notice that you sent to our customer service representative at www.cureforSARS.net wherein you wrote:

"The Federal Trade Commission staff has reviewed marketing claims on your web site . . . and that "we remind you that the FTC Act requires that health-related claims, . . . [for] SARS must be supported by competent and reliable scientific evidence at the time the claims are made."

This provides you with notice of three health-related claims that we are making regarding SARS and our Internet communications: 1) The scientific evidence supporting our justifiable claims regarding the utility of a plant-based formula for SARS is available on our website—www.cureforSARS.net—based on the scientific publication by Towers, et al.(1995) from the *Journal of Ethnopharmacology*; 2) We do not recognize the FDA, or your "commission" in collaboration with them, pursuant to this notice, as anything other than irresponsible, misplaced, and misdirected authority; and 3) The insidious economic motive behind your political notice is transparent among well-educated consumers and natural healthcare investigators and providers.

Such commercial interference, allegedly on behalf of American consumers and public health, is rooted in the advancing Anglo-American global *Codex Alimentarius* legislation that seeks to control all non-patent-protected natural cures and treatments on behalf of multinational drug companies (best termed the "global petrochemicalpharmaceutical cartel").

In other words, we view the FDA's widely publicized persuasion campaign attacking natural healing practitioners and formula manufacturers as a real life enactment of the "Wizard of Oz." Pull back the curtain and behold who profits pulling strings on your commission and the FDA overstepped authority.

We notice that responsibility for your electronic notification was signed, not by a person, but by your non-human organization/entity. For your information and official notification, we only respect and respond to real people.

As sovereign individuals subservient to only one Creator, we rebuke any and all misplaced authority in your "commission." We do this cognizant of rapidly advancing multinational corporate efforts increasingly administered through the World Health Organization (WHO), affecting global drug sales, healthcare policies, and contrived declarations of urgencies directed against nation states to compel compliance with neocolonialistic politics, policies, and interventions inconsistent with personal freedoms and democratic governments.

Your transparent efforts may be effective in deceiving the general population, but most of us in the natural healing arts and sciences are not fooled or frightened by your threats.

Figure 12.7. Dr. Horowitz's Initial Response continued.

Most members of our allied organizations view as inexcusable, if not despicable, increasing GermanAmerican political efforts to suppress natural healing methods and materials. This includes new SARS treatments and potential cures at a time of global urgency when, in fact, government health officials in the hardest hit nations, including China, Hong Kong, Singapore, and Taiwan, have been embracing herbal and plant-derived natural medicines for the prevention and treatment of SARS.

We notice your commission and the FDA turns a blind eye to the promotion and use of the experimental, expensive, and highly toxic drug Ribavirin, never tested against the SARS-associated coronavirus, yet widely promoted as the standard for SARS patient care since before anyone knew the illness was linked to a coronavirus. Reflecting on the FDA's and your commission's official tolerance of this harmful, if not lethal, practice by the mainstream media and medical doctors treating SARS patients adequately exposes your hypocrisy.

American tax dollars would be far better spent having your commission and the FDA address the third leading cause of death in the United States—iatrogenesis, that is, physician-induced illnesses and lethal drug side effects. How do you have the audacity to virtually disregard this pervasive public health threat, yet proclaim throughout the media our natural healthcare industry's shortcomings?

What is most sad is your organizations' manipulation of the average American who does not comprehend this joint FDA/FCC attack for what it really is—simply a promotion to facilitate a form of nutritional and pharmacological slavery through a political and economic drug agenda called *Codex Alimentarius*. In recent years the global drug cartel has sought to pirate and patent anything uncontrolled in nature's bounty. Examples of this, in recent months, include further violations of freedom of choice with declared restraints on ginseng production and the classification and labeling of stevia—the natural therapeutic sugar substitute—as a regulated “nutritional supplement” rather than a food.

Beyond these reasons for our disregard of your authority, there are many more egregious violations of human rights perpetrated by those with whom you are associated. One example involves the origin of HIV/AIDS and the FDA's apparent role, in collaboration with the Merck pharmaceutical company and the Centers for Disease Control and Prevention (CDC), having cooperatively produced the 1974 hepatitis B vaccines tested on gay men in New York City and Central African Black women. According to the most recent scientific evidence cited and discussed at www.originofAIDS.com, this collaboration played a major role in triggering the international AIDS pandemic.

In conclusion, we will not be intimidated, coerced, or corrupted by your drug company collaborating administration and/or commission. We understand that mostly well-meaning persons within your ranks have been persuaded, largely by deception, to act as agents on behalf of the above named global menaces. We simply rebuke your misdirected, politically contrived authority, yet remain open to serving your policy-makers by sharing, in every way possible, the uncommon intelligence required to expose and arrest the “Wizard of Oz behind the curtain” for the sake of world health and the public's protection.

Very truly yours,

www.cureforSARS.net

By: Leonard G. Horowitz, D.M.D., M.A., M.P.H., Managing member

www.Dr.LenHorowitz.com

Figure 12.8. Letter Serving to Transform the FDA

Healthy World Distributing, LLC

206 North 4th Avenue • Sandpoint, ID 83864 • 208-265-2575 • (FAX)

208-265-2775

June 12, 2004

Charles M. Breen
District Director, and
Lisa M. Althar, Compliance Officer
Food and Drug Administration
Seattle District
22201 23rd Drive SE
Bothell, WA 98021-8788
Tel 425-486-8788
Fax: 425-483-4996

RE: "WARNING LETTER" and reply to Chapter II Definitions and Codes

Dear Mr. Breen and Ms. Althar:

Following Bruce Williamson's prompt and courteous transmittal of Chapter II Definitions and codes we seek to clarify, for the public record and our compliance process, certain regulatory conditions and powers legally assumed by your administration. These points of clarification pertain to the following definitions quoted from your regulations, and wherein not provided, from *Black's Law Dictionary*, and *Webster's Dictionary*. Your considerate response will help guide our further determinations to secure, when legally, ethically, and morally justified, our swiftest compliance.

The FDA's definition of "drug" reads:

"(g)(1) The term "drug" means (A) articles recognized in the official United States Pharmacopoeia, official Homeopathic Pharmacopoeia of the United States, or official National Formulary, or any supplement to any of them; and (B) articles intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in man or other animals; (C) articles (other than food) intended to affect the structure or any function of the body of man or other animal. (D) articles intended for use as a component of any article specified in clause (A), (B), or (C). A food or dietary supplement for which a claim . . . is made . . . is not a drug solely because the label or the labeling contains such a claim. A food, dietary ingredient, or dietary supplement for which a truthful and not misleading statement is made in accordance with section 403®(6) of this title is not a drug under clause (C) solely because the label or the labeling contains such a statement."

The Urbani SARS Formula is an "article" not cited in any of the texts referenced in (A), thus, consideration is deferred to paragraphs (B), (C) and (D) which all refer to "articles" that might be construed as a "drugs." The term "article" is important, and deserves of further clarification by legal definition as detailed below.

Paragraph (B) clearly articulates a generic regulation covering all "articles," defining each as a "drug" only when they pertain to "the diagnosis, cure, mitigation, treatment, or prevention of disease."

Therefore, does your administration hold that by this precise definition we shall consider *all* "articles" or "substances" which have historically proven efficacious in the treatment of diseases including infant jaundice and mood disorders, "drugs?" What about the sun or sunlight? This is *not* a flippant question considering its high pertinence with respect to the classification and future labeling of the Urbani SARS Formula, the nutrients of which gained and relay their therapeutic efficacy directly from sunlight. Please clarify if the FDA

Figure 12.8. Continued.

considers the sun, sunlight, colored light frequencies, or botanicals deriving their potency from such natural process(es) to be “drugs,” and then kindly explain the legal, ethical, and moral justification for your regulations in this regard. Then we shall immediately take this new information under advisement for prompt compliance.

Paragraph (C), defines a “drug” as articles (other than food) intended to affect the structure or any function of the body of man or other animal. Leg braces, likewise, are often prescribed to affect the structure and function of bodies. Are we to consider leg braces, by this definition, a drug? If so, please detail the FDA’s conclusive analysis in this regard as well.

Furthermore, the definition of “food” must be considered as per subsection (f) which states “[t]he term ‘food’ means (1) articles used for food or drink for man or other animals . . . and (3) articles used for components of any such article.”

We advertise and market the Urbani SARS Formula as an herbal tincture, which we believe falls under the classification of nutritional or “dietary supplements” and food ingredients since this health product (as well as its individual ingredients) is (are): 1) consumed orally and/or by drink; and 2) contains all natural organic herbs containing nutrients with proven therapeutic value (e.g., vitamin C in rose hips) including readily available studies linking such nutrients to the amelioration of respiratory (and other) ailments. Further, at least two of the nutritional ingredients in the Urbani SARS Formula, (i.e., the North American service berry and rose hips) have proven, scientifically published, efficacy in the prevention of cell death from coronavirus infection commonly considered a causative factor in the development of common colds.

Paragraph (D) establishes as drugs, “articles intended for use as a component of any article specified in clause (A), (B), or (C). Since Urbani SARS Formula components may be “recognized in the official United States Pharmacopoeia, official Homeopathic Pharmacopoeia of the United States, or official National Formulary,” as per clause (A), consideration might be given to each ingredient’s “drug” classification and labeling requirements. However, for the reasons explained above concerning paragraphs (B and (C), paragraph (D) may or may not apply in our case. Thus, we request that you kindly relay whether or not your administration feels this stipulation requires our remedial action, and if so, what possible remedies might entail.

Paragraph (D) also relays what is clearly our situation: “A food or dietary supplement for which a claim . . . is made . . . is not a drug solely because the label or the labeling contains such a claim. A food, dietary ingredient, or dietary supplement for which a truthful and not misleading statement is made in accordance with section 403®(6) of this title is not a drug under clause (C) solely because the label or the labeling contains such a statement.” We believe this holds for our advertisements/marketing resources as well. Please respond to this reasonable perspective. We are not opposed to routinely adding this clarification where indicated.

Additionally, we request your assistance in dealing with the ethical and moral questions raised by FDA regulation of “articles” and “substances” defined as “drugs.” Obviously, these definitions and determinations were established on the basis of political and/or legislative consensus. When such control conflicts with religious convictions and Biblical prescriptions for healing, what remedies are available to persons inconvenienced and/or harmed by these codes and regulatory threats? This is especially important in our case, since as the Overseer and Managing Member of Healthy World Distributing, LLC, I must be responsible to other members, all of whom do not work for profit, but for human service as per our spiritual mission(s).

The following paragraphs are provided to initiate this necessary discussion and reconciliation, which deals with matters of church and state and civil rights pursuant the First and Fourteenth Amendments of the Constitution of the United States, and advertising/marketing semantics acceptable to the FDA.

Figure 12.8. Continued.

First some definitions relevant to this dialogue: Your codes make repeated reference to the term "articles," although this word was not defined in your literature. Thus, we consulted *Black's Law Dictionary*, which provides the pertinent definition for "articles" as "1. Generally, a particular *item* or *thing* . . . 2. A separate and distinct part . . ." *Webster's Dictionary* defines "item" as "an object of attention, concern or interest." The word "thing" is defined herein as "the concrete entity as distinguished from its appearance . . . possessions . . . effects . . . whatever may be possessed . . . a material or *substance* of a specific kind." However, the important word *substance* (e.g. "substance abuse;" "FDA controlled substances," "government regulated substance," "toxic substance," etc.) has at least two important definitions that concern us in-so-far-as your regulatory action against us and others who, under constitutionally guaranteed rights, freely choose to serve our Creator and humanity. In this regard, quite surprisingly, "substance" is defined in *Webster's Dictionary* as "1. a: essential nature: essence b: a fundamental or characteristic part or quality c. Christian Science: GOD 1b 2 a: ultimate reality that underlies all outward manifestations and change . . . 3 a: physical material from which something is made or which has discrete existence." Therefore, does the FDA's enforcement authority assert or imply the regulation of *Webster's* first two definitions of substance, or simply the third? This is an important distinction. Does the FDA's commission merely concern "articles" of "physical material," "things," "items," not of the spirit, "essence" "fundamental . . . ultimate reality" or "GOD?" These metaphysical factors and forces, expressed through electrogenetics, provide the "substance(s)" of therapeutic efficacy in our scientific and theological understandings.

Under current First Amendment constitutional law, the government imposes restrictions on religious beliefs or practices as long as the law in question applies to everyone and does not target a specific religion or religious practice. The implications of unrestricted regulation of all people's fundamental spiritual and/or religious practices as in our case in herbal healing, are monumental and politically troublesome. Still, current policies appear to support the FDA's regulatory position regarding botanicals and Biblically prescribed substances such herbs and essential oils that, scientific evidence shows, derives its therapeutic value directly from metaphysical or spiritual forces. Does the FDA hold a position paper, or policy position, on the use of such spiritually endowed, religiously ordained, and historically/empirically proven "articles" in the context of healthcare and healing? If so, please relay this in writing. If not, what remedy(ies) can we expect, and when will such action(s) be taken?

Does the FDA acknowledge separation of church and state? If so please indicate how, when, where, and why; and address this clarification to the subject of regulated "substances," and the words *healthcare* and *healing*, specifically. Our evaluation indicates the later two emphasized words are missing from your WARNING LETTER and 201(g)(1)(B).

Remedially, therefore, since no mention or implied restriction by the FDA exists concerning claims pertaining to the usefulness of our "articles" in "healthcare" or "healing," we may relabel and advertise our products as nutritional supplements, clearly not "drugs," for "use in *healing* respiratory conditions." Are you comfortable with this? If not, please state precisely why this is *not* in compliance with FDA regulations.

Moreover, are the FDA's regulations regarding SARS consistent with enforcement policies pertaining to other diseases? If there is a difference, please include in your reply by what authority has this distinction been made, and by what license has special enforcement policies been adopted?

Under Fourteenth Amendment rights, "no state shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any state deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws." Under these circumstances, considering the above questions posed by your "WARNING LETTER;" viewing our company's history, spiritual focus, and evidenced human service commitment, would you not deem the necessity of this dialog, and your written threat of

Figure 12.8. Continued.

property "seizure," along with warning of "injunctions" against us, as a violation of our Fourteenth Amendment rights? If not, please clearly cite your reasons why not for open and productive discourse between your administration and ours, for public witness.

As per your polite notice of generally enforced demands, and request that we notify your office "in writing within fifteen working days" to explain "each step" being taken by our company to dispel your legal and criminal concerns, our response plan is this: 1. Review legal definitions pertaining to FDA codes and entitlements as they pertain to this and pending actions; and 2. Collaboratively develop revised advertising and marketing materials on "regulated 'substances'" of central importance to our company's mission and managing members.

Pertaining to remedies regarding your compliance request, following your detailed response to the above questions and concerns, we will quickly work to relabel this product clearly citing its status as a nutritional supplement. We will further develop our marketing resources to reflect this fact.

We propose to withdraw the objectionable statements from which you arbitrarily, albeit legally, deemed the designation of "drug" in describing the Urbani SARS Formula, substituting references "for use in respiratory healthcare" and/or "the *healing* of coughs, colds, flues, and pneumonias." Please provide your opinion in this regard.

If you require the implementation of any additional remedies, please let us know at your earliest convenience so that we may take these under consideration for ameliorative action(s) as well.

Finally, since your "WARNING LETTER" was served certified mail, this hardcopy will be faxed as well as mailed certified, for the legal and public records. Moreover, since your administration is tax funded to serve as a public protector, and our media affiliates will find your official response to our compliance program of great national interest, please be certain to respond to our helpful questions by certified mail so that we can assure most timely implementation of all remedial actions.

Sincerely yours,

Healthy World Distributing, LLC

Leonard G. Horowitz, Overseer, Managing Member

Cc: M. Gustafson

“The helping hand is needed that raises the helpless
to courage, to struggle, to faith, to health.
Love. Laugh. Love and laughter are the beckoners
to faith and courage. Trust on, love on, joy on.
Refuse to be downcast. Refuse to be checked
in your upward climb. Love and laugh.
I am with you.”

GOD CALLING

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- Dulles Airport was coincidentally named in recognition of Rockefeller business managers and Standard Oil Company lawyers, Allen and John Foster Dulles, who, more than anyone, administered intelligence operations and contracts between Rockefeller family holdings and the Third Reich's economic engine I.G. Farben the chemical/pharmaceutical giant directed by Bayer Company President, Hermann Schmitz. Schmitz, also a major Standard Oil company shareholder, was found guilty at Nuremberg trials just prior to Allen Dulles taking command of the CIA. After the war, the CIA took over the posh I.G. Farben building that remained intentionally unscathed in the vastly devastated city of Frankfurt, Germany.
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About the Author



Leonard G. Horowitz, D.M.D., M.A., M.P.H., is an internationally known authority in public health and emerging diseases. The author of the national bestseller, *Emerging Viruses: AIDS & Ebola Nature, Accident or Intentional?*, he has appeared repeatedly as a newsmaker and health expert on every major television and radio network in America, Canada, as well as the BBC. Distinguished by several academic degrees, and previous faculty positions at Harvard and Tufts universities, Dr. Horowitz currently oversees development of the Steam Vent Inn & Health Retreat, and the International Institute for Na-

tive and Natural Healing, near Volcanoes National Park, on the Big Island of Hawaii. His website is: www.DrLenHorowitz.com.

Dr. Horowitz earned his doctorate in medical dentistry from Tufts University in 1977, a master of arts degree in health education from Beacon College in 1980, and a master of public health degree in behavioral science from Harvard University in 1981.

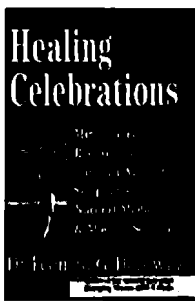
Considered one of healthcare's most captivating and controversial motivational speakers, Dr. Horowitz served on the faculties of Tufts University, Harvard University, and Leslie College's Institute for the Arts and Human Development, and additionally as a consultant to several leading healthcare corporations and national associations.

In 1999 he received the "Author of the Year Award" by the World Natural Health Organization, in 2005 a "World Leading Intellectual Award" from the World Organization for Natural Medicine, and in 2006 he was knighted for his works saving lives through vaccine risk awareness by the Sovereign Orthodox Order of Knights Hospitaller of Saint John of Jerusalem.

Dr. Horowitz has published more than 125 articles in scientific and lay periodicals, two dozen audio and videotape programs, and sixteen books including *Healing Codes for the Biological Apocalypse*, a landmark publication that revealed sacred Bible codes intimately involved with the music of creation. In 2000, based largely on these revelations, he authored *Healing Celebrations* which demystified the steps required to produce miraculous healings. Three months prior to 9-11, he released the prophetically titled *Death in the Air: Globalism, Terrorism and Toxic Warfare*. In 2007 he published *Walk on Water* and *LOVE the Real Da Vinci CODE*.

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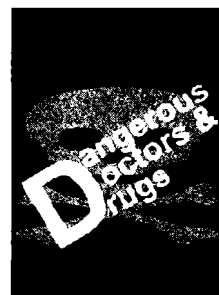


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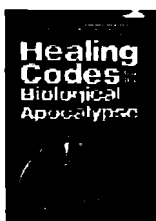
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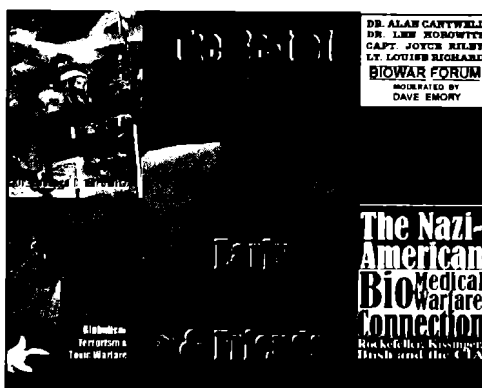
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